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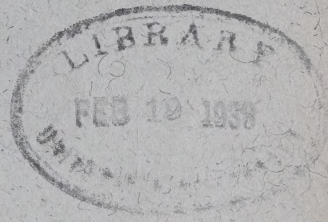
First
Annual Report

of the

Director of Technical Education
for Canada

For the Fiscal Year ending March 31, 1920
(School year ending June 30)

Being the first report on the operations of
the Technical Education Act
Assented to July 7, 1919



Issued by the Department of Labour, Ottawa

OTTAWA
THOMAS MULVEY
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1921

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To the Honourable Senator G. D. ROBERTSON, LL.D.,
Minister of Labour.

SIR,—I have the honour to submit the report of the Director of Technical Education for the fiscal year ended March 31, 1920, setting forth the operations under the Act for the promotion of technical education in Canada enacted on July 7, 1919.

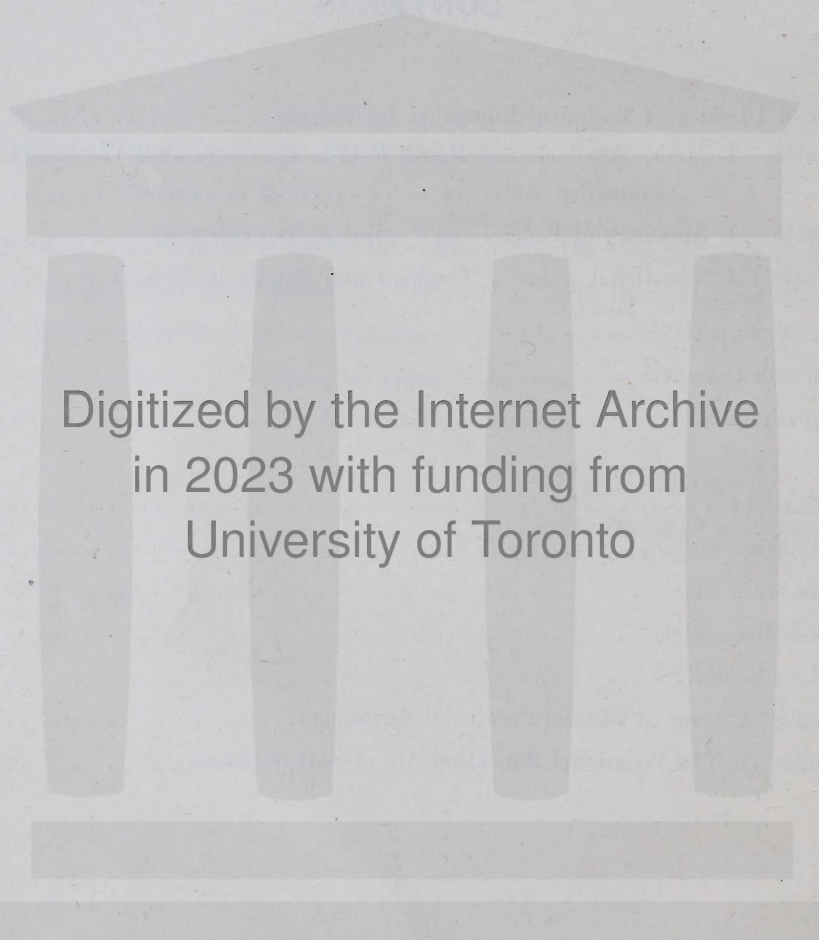
I have the honour to be, sir,

Your obedient servant,

F. A. ACLAND,
Deputy Minister of Labour.

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TECHNICAL EDUCATION IN CANADA

REPORT OF THE DIRECTOR OF TECHNICAL EDUCATION FOR THE FISCAL YEAR ENDED MARCH 31, 1920

(The report received from Prof. Gill, Director of Technical Education, covers the year ended June 30, 1920. The report covers the first year's proceedings under the Technical Education Act, activities under the statute having, however, commenced only towards the close of the calendar year 1919, being coincident with the appointment of the director. The director has found it convenient to bring his statement down to the close of the school year, June 30, three months later than the close of the fiscal year. The payments made under the statute to the close of the fiscal year are, however, also indicated. The governing statute requires that the report made under its provisions shall include the reports made by the several provinces on the work done in each province for the promotion of technical education and the expenditure connected therewith, and the reports of the several provinces are accordingly appended to the report of the Director of Technical Education.)

Prof. L. W. Gill, Director of Technical Education for Canada, reports as follows:—

INTRODUCTION

For the purpose of assisting the provinces in promoting technical education, the Act provides authority for the Minister of Labour to distribute to the Provincial Governments, under specified conditions, an amount of money not exceeding \$700,000 during the fiscal year ending March 31, 1920. The amount available for each province is determined, according to section 4 of the Act, by first setting aside \$10,000 for each province and dividing the remainder in proportion to the population as shown by the last decennial census. According to this method of allotment, the amount available for each province for the year was shown in table I. This table also shows the amount paid to the provinces in accordance with the provisions of the Act.

For purposes of administration, especially in connection with the tabulation of statistics, it has been found more convenient to base the annual report on the school year, which ends June 30, rather than on the federal fiscal year. For those who are interested only in financial matters within the fiscal year, table I has been prepared. This table shows the amount of money paid out of the federal grant during the fiscal year ending March 31, 1920. Table II is a complete financial statement covering provincial and federal expenditures for the school year ending June 30, 1920. Table III is a statement of the educational work done in the provinces in the same year.

CONDITIONS IMPOSED BY THE ACT

1. Section 3 of the Act provides that an Order in Council shall be passed by each province indicating its desire to take advantage of the provisions of the Act. This condition has been fulfilled by all of the provinces.

2. Section 6 provides that between the minister and each province which has signified its desire to take advantage of the Act an agreement must be reached with respect to the character and scope of the work to be done. In accordance with this provision, agreements have been executed with all the provinces. The terms of the various agreements are substantially the same, minor differences being necessary to meet the conditions which are incidental to the different systems of education in the provinces. These agreements are to be renewed annually, modifications being made from year to year as may be mutually agreed upon. The working out of these agree-

ments has given rise to the most cordial relations between this department and all of the provincial departments of education, and the foundation has been laid for harmonious and effective co-operation in the promotion of all phases of the work.

A typical agreement is presented in Appendix I.

3. According to section 5, payments from the federal grant are to be made only on condition that an equal amount is expended on technical education by the Provincial Governments. The amounts paid out from the federal grant were, therefore, equal to one-half of the total moneys paid out of the provincial treasuries for purposes of technical education.

PURPOSES OF THE ACT

4. "Technical Education," as defined in section 2 of the Act, "means and includes any form of vocational, technical or industrial education or instruction approved by agreement between the minister and the Government of any province as being necessary or desirable to aid in promoting industry and the mechanical trades, and to increase the earning capacity, efficiency and productive power of those employed therein." According to this definition, technical education may include any form of education or training which will fit a boy or girl for useful employment in any chosen vocation. The chosen vocation may be in the field of manufacturing, engineering, commerce, trades, fisheries, agriculture, home-making, professions, etc. "Technical" and "industrial" are thus included in "vocational" education. The latter term, being the most comprehensive and the one generally used in the United States, will in future be used to include all work to be promoted under the provisions of the Act.

5. While the above definition of technical education is very broad and comprehensive, it was clearly not intended that the Act should provide assistance for work already organized or established. Consequently the work to be promoted under the provisions of the Act has been limited to vocational education which has not been provided for except in a minor degree. The vocations for which education and training have been established are: (1) the professions (involving a degree), (2) teaching (elementary and high school), (3) agriculture—a federal grant has been given for this work. In accordance with the above, all work of college grade (courses leading to a degree), the training of nurses, the training of teachers for elementary and high schools, and agricultural education have been excluded from the benefits of the Act. The work of the elementary schools and the academic courses in high schools, including manual training, are excluded because they are not vocational, and because they have been long established and provided for.

With the above noted classes of educational work eliminated, the field for vocational training is fairly well defined.

CHARACTER OF THE TRAINING

6. The Act does not provide for any specific kind of education or training. The character of the work is to be determined by federal-provincial agreement. In view of the fact that the Act was fundamentally based on the recommendations of the Royal Commission appointed in 1910, the report of the commission was looked to for guidance on this question. According to the recommendations of the commission, "the aims of industrial training and technical education" should be:—

- (1) The preservation of health and the vigour of life.
- (2) The formation of good habits.
- (3) The development of the sense of duty and responsibility.
- (4) The preparation of the body, mind and spirit for following some useful occupation.
- (5) The cultivation of the mental powers, the acquisition of knowledge and the development of the scientific spirit with reference to the occupation.
- (6) The promotion of good-will, and desire and ability to co-operate with others.
- (7) The maintenance of standards and ideals.

7. There are those who would restrict the work of technical education to such instruction or training as would improve the efficiency of the boy or girl as a productive machine. The adoption of such a policy would create an army of slaves instead of an army of happy, industrious citizens. It has, therefore, been decided that the aims of vocational education in Canada shall, as far as possible, be those laid down by the commission. On this basis the dominant purpose of any course of vocational education shall be to train for citizenship, the fitting for useful employment being regarded as the crowning element in the educational system. Before starting on a definite course of vocational training, the pupil should be aided and encouraged in finding his own aptitudes and in selecting a vocation for which his native ability is best suited. In accordance with the aims set forth above, emphasis should be placed on the development of character and ability to co-operate with others. This involves the development in the individual of good-will toward others, loyalty to the community, and a definite sense of responsibility for the maintenance and improvement of organized society.

REPORT OF PROGRESS

8. For a considerable time previous to the war, the provinces of Nova Scotia and Ontario had been conducting technical evening classes. A little later, Ontario established some technical day schools. Quebec and Alberta followed with both day and evening classes. At the present time all the provinces, with the exception of Prince Edward Island, have made a good start. All realize the necessity of vocational education, and all are taking steps to develop the work as rapidly as possible. With the exception of Saskatchewan and Prince Edward Island, all have appointed a special officer to take charge of this work. In the case of the two provinces mentioned, the demand for vocational education, other than agriculture, is not very great, especially in Prince Edward Island. Notwithstanding this, the province of Saskatchewan has under consideration the appointment of a man to take charge of the work of vocational education in the province.

9. Notwithstanding that a considerable amount of work has already been done in some of the provinces, it cannot be said that the work has been extended to cover any considerable portion of the field. If Canada is to keep up in the commercial race, the technical school accommodation must be increased within the next ten years at least to equality with the present high school accommodation.

10. The enactment of the Technical Education Act, followed by the appointment of a Federal Director, has given a decided impetus to the work in all the provinces, and the next few years should witness a decided development. The increased cost of building and of equipment will no doubt adversely affect this development, as it will present an insuperable difficulty to some of the smaller towns and cities. As an illustration, it may be pointed out that for a city with a population of 50,000 the cost of building and equipping a technical school to meet even present needs will exceed \$200,000. Yet the total amount available from the federal grant last year for the largest of the western provinces was only \$51,838. To assist in overcoming this difficulty it may be necessary for the Federal Government to aid the provinces on the more liberal scale recommended by the Royal Commission.

11. In addition to the lack of money to provide the necessary accommodation, there is difficulty in securing properly qualified teachers. On account of the large expense involved, none of the provinces has attempted to adequately cope with this problem. In any educational work the teacher is by far the most important factor, but we appear to have almost lost sight of the deep significance of this fundamental fact. We train teachers—at least we pretend to—for the elementary and high schools. If it is profitable to do this it will surely be more profitable to train teachers for technical schools, since the work of these teachers is more complex and difficult. In vocational work the teacher must not only *know*, through actual experience in productive employment, the practical side of the vocation toward which the pupil is being

guided, but he must also know how to guide his pupils—how to keep their minds active on constructive problems. It is fundamentally important that the vocational teacher should guide the pupil rather than impart knowledge. The latter should be incidental. In this connection I may venture the statement that one of the great weaknesses of our present educational system is the tendency to regard the adolescent mind as a storehouse which should be filled with information, rather than as a living, growing organism which should be trained to function properly—i.e., to think independently, logically and constructively.

12. At the present time the work in every province is suffering from an inadequate supply of properly trained teachers. For this work a special training is necessary. Existing institutions which are equipped to train teachers for ordinary educational work are of no use for this purpose. An institution equipped and staffed for this special purpose must be provided if properly qualified teachers are to be secured. It is within the financial possibilities of the provinces of Ontario and Quebec to provide teacher-training institutions which will meet their own needs, but at the present time it would be too great a burden for the other provinces. Under these conditions the best solution of the problem would obviously be the establishment of one institution for the whole of Canada through the co-operative effort of all the provinces. This solution would not only be the most economical but it would be the most efficient. Another possible solution would be co-operative action by the four western provinces and similar action by the eastern provinces. The first solution would not only provide the necessary teachers but it would serve to create a national spirit and a unity of purpose which are the corner stones on which a nation is built.

REPORTS OF PROVINCES

13. These are included in the latter part of this report.

TABLE 1.—Money Available and Money Paid to Provinces under Technical Education Act, Fiscal Year ending March 31, 1920

Province	Amount Available	Amount Paid
	\$ cts.	\$ cts.
British Columbia.....	43,346 01	19,407 78
Alberta.....	41,832 35	23,374 21
Saskatchewan.....	51,838 18	809 18
Manitoba.....	48,710 03	4,487 42
Ontario.....	224,383 30	111,751 06
Quebec.....	180,199 30	94,716 96
New Brunswick.....	39,897 30	4,561 77
Nova Scotia.....	51,830 18	14,679 61
P. E. Island.....	17,963 35	Nil
Totals.....	700,000 00	273,787 99

TABLE II.—Summary of Federal and Provincial Expenditures, School Year ending June 30, 1920

	Expenditure made by Local Boards				Expenditure made by Provincial Governments						Paid from Federal Grant	
	Capital Expenditures	Teachers' Salaries		Maintenance and supplies	Administration	Teacher Training		Instruction by correspondence	Grants to Local Boards			Total
		\$	cts.			On Capital account	On Teachers' Salaries		On Maintenance, etc.			
										\$		
British Columbia.....	\$ 9,006 08	\$ 98,259 16	\$ cts.	4,390 14	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
Alberta.....	75,624 99	85,620 06		4,863 13		2,461 15	3,787 50	28,741 88	39,380 77	19,690 38	26,370 31	
Saskatchewan.....	952 75	2,284 00		*		7,288 68	75,624 99	19,472 64	107,449 44	1,618 37	809 18	
Manitoba.....		64,398 75					476 37	19,023 54	19,023 54	1,618 37	809 18	
Ontario.....	300,506 54	410,743 06		18,660 96	3,685 60		156,462 18	172,466 37	351,275 21	9,511 77	138,711 18	
Quebec.....	221,930 00	149,944 00	\$ 465,546 00	8,625 00		\$ 195,953 37			216,578 37	102,289 28	5,000 79	
New Brunswick.....		3,174 50	\$ 1,107 19	5,869 71	1,991 03		5,893 59	14,403 00	30,230 28	13,115 14		
Nova Scotia.....	5,893 59	14,403 00		7,597 13								
P. E. Island.....												
	413,913 95	\$28,826 53		50,006 07	5,676 63	9,749 83	242,244 63	452,990 25	2,800 15	763,557 56	337,498 03	

*No separate administrative staff.
†Includes grants for all purposes.
‡Approximate figures.
§Work in this province not yet started.

*No separate administrative staff.

†Includes grants for all purposes.

‡Work in this province not yet started.

TABLE III.—Vocational Schools, Teachers and Pupils in Canada, Year ending June 30, 1920

Provinces	Number of Schools			Number of Teachers			Pupils Enrolled		
	Day	Evening	Day and evening	Day	Evening	Correspondence Dept.	Day	Evening	Correspondence Total
British Columbia.....	4	6	4	56	99	1	990	2,448	83
Alberta.....	2	10	3	41	62	2	1,099	1,357	124
Saskatchewan.....		1		2	21		55	1,411	
Manitoba.....				33	85		118	1,888	
Ontario.....	3	38	4	183	931		1,159	37,370	
Quebec.....	1	15	13	64	*85		4,505	4,723	
New Brunswick.....	2	2	4	5	23		650	1,800	
Nova Scotia.....		26	1		117		54	2,830	
P. E. Island.....									
Totals.....	12	98	29	384	1,423	3	8,512	51,827	207
									60,546

* Approximate.

† Returns not complete.

PROVINCE OF BRITISH COLUMBIA

REPORT ON TECHNICAL EDUCATION FOR YEAR ENDING MARCH 31, 1920

The extent of the technical work in the province of British Columbia is covered by the following activities: a series of night schools for industrial work; a correspondence school in mining and mine surveying; a day technical course for boys in Vancouver and a household science course for girls in the same city.

NIGHT SCHOOLS

During the year 1919-20 night schools were held in the following places:—

Cities	Students	Courses of Study
Cumberland.....	11	1
Chilliwack.....	96	7
Coal Creek.....	28	2
Fernie.....	32	2
Merrit.....	45	2
Nanaimo.....	77	5
North Vancouver.....	152	7
Ocean Falls.....	15	2
South Vancouver.....	213	7
Union Bay.....	10	1
Victoria.....	514	22
Vancouver.....	1,276	22

The courses of study embraced: commercial English, commercial arithmetic, typewriting, shorthand, book-keeping, accountancy, telegraphy, Spanish, French, engineering, mathematics, mechanics, draughting, electrical engineering, carpentry and joinery, ship-building, civics and economics, journalism, cookery, dressmaking, millinery, drawing and design.

The men and women engaged in giving instruction in these subjects were employed in the various industries and were chosen for their thorough working knowledge of that which they had to teach.

CORRESPONDENCE COURSES IN MINING

Correspondence courses in coal-mining and mine surveying were conducted for men engaged in the coal-mining industry in order to provide the requisite training for the examinations held by the Department of Mines. The instructor is a thoroughly competent mine manager and engineer and holds first-class papers in British Columbia, Alberta and Nova Scotia. Eighty-three pupils are enrolled and gratifying results are being secured.

The courses of study are as follows:—

- No. 1. Preparatory mining course for boys over fourteen years of age who have left school.
- No. 2. Course in arithmetic and mathematics.
- No. 3. Course for fireboss, shiftboss or shotlighter's papers—Third class.
- No. 4. Course for overman's papers—Second class.
- No. 5. Course for mine manager's papers—First class.
- No. 6. Course in mine survey work.

TECHNICAL COURSE

The technical course for boys has been held during the past three years in King Edward High School, Vancouver, but if the plans of the Board of School Trustees in that city mature a technical school will be provided in which to commence work next September.

Subjects.—The course is composed of the following subjects:—

First Year.—(Fundamentals of industrial work).—English, practical mathematics, shop-work in wood and metal, draughting, drawing and design, mechanics, physics, electricity and magnetism, civics and economics.

Second Year.—(Fundamentals with a direct vocational bias).

Third Year.—(Vocational).—English, business forms and usages, civics and economics, practical mathematics, shop-work in wood and metal, draughting, drawing and design, mechanics, physics, electricity and magnetism, chemistry.

Number.—There are 140 boys taking first-year course; 95 boys taking second-year course; 31 boys taking third-year course.

Staff.—The thirteen members of the staff are men who enter into the vocational aspect of their work and those who teach the shop-work and allied subjects do so in the light of their practical experience.

HOUSEHOLD SCIENCE OR HOME-MAKERS' COURSE

This course is designed to give training to potential home-makers and at the same time to give a fitting preparation for industrial life. It has now been in existence for three years and the various courses are as follows:—

First Year.—English, arithmetic, hygiene, physiology, cookery and dietetics, physics, sewing and dressmaking, millinery; any two of the following subjects—French, mathematics or instrumental music and drawing and design.

Second and Third Years.—English, arithmetic, child welfare, physiology, cookery, dietetics and home-nursing, physics, chemistry, sewing and dressmaking, millinery; any two of the following four subjects—French, mathematics, instrumental music, drawing, design and art handicraft.

Number.—There are 24 girls engaged in first-year work; 14 girls in second-year work; 8 girls in third-year work.

Staff.—The staff of one full-time and eight part-time teachers are well trained for their work. Sewing, dressmaking and millinery are taught by one who has herself conducted a business and thus understands the problems of the workroom.

COMMERCIAL COURSES

Commercial courses are conducted in Vancouver, Victoria, New Westminster, North Vancouver, South Vancouver, Kamloops, Nelson and Revelstoke. The commercial course extends for three years and the subjects are as follows:—

First and Second Years.—Reading and orthopy, penmanship, spelling, English literature, composition, history, arithmetic, book-keeping and business forms, typewriting, shorthand.

Third Year.—Penmanship, English literature, arithmetic, business correspondence, accountancy, laws of business, statute law, elementary economics and civics, typewriting, shorthand.

These courses are purely vocational and an endeavour is being made to fit youth for office work and a business career.

At present the work in the technical courses is being conducted in the high schools, but the beginning of the season 1920-21 will see technical schools in Vancouver and New Westminster, while Victoria will most probably use part of the high school for the course in question.

As recommended by Mr. L. W. Gill, Dominion Director of Technical Education, everything possible will be done for those pupils who at present proceed to work

without entering high schools. After the technical schools are equipped and in running order it will be possible to present intensive vocational courses which will appeal directly to such boys and girls.

It is also the intention of this department to encourage a "follow-up system" whereby the placing of the pupil in industrial work will follow his training as a natural consequence.

Enclosures will be found to contain the following statement of expenditures on night schools:—

STATEMENT OF EXPENDITURES ON NIGHT SCHOOLS—

Chilliwack.. . . .	\$ 514 40	
Coal Creek.. . . .	160 00	
Fernie.. . . .	134 40	
Merritt.. . . .	128 00	
Nanaimo.. . . .	640 00	
North Vancouver.. . . .	1,116 40	
Ocean Falls.. . . .	230 40	
South Vancouver.. . . .	1,673 60	
Union Bay.. . . .	36 00	
Victoria.. . . .	2,028 40	
Vancouver.. . . .	3,258 80	
		\$ 9,920 40

STATEMENT OF EXPENDITURES ON COMMERCIAL WORK—

Kamloops.. . . .	\$ 520 00	
Nelson.. . . .	520 00	
New Westminster.. . . .	1,073 32	
North Vancouver.. . . .	606 66	
Revelstoke.. . . .	520 00	
South Vancouver.. . . .	1,256 66	
Vancouver.. . . .	2,836 66	
".. . . .	2,645 00	
".. . . .	1,878 33	
Victoria.. . . .		\$11,856 63

EXPENDITURES ON TECHNICAL WORK—TEACHERS—

Vancouver.. . . .	\$5,079 15	
".. . . .	1,663 64	
		\$ 6,742 79

EXPENDITURES ON CAPITAL ACCOUNT—

New Westminster.. . . .	\$ 500 00	
Nelson.. . . .	500 00	
Vancouver.. . . .	2,000 00	
Victoria.. . . .	687 50	
		\$ 3,687 50

EXPENDITURES ON ADMINISTRATION.. . . .

\$6,444 31	
	\$ 6,444 31

Total expenditure.. . . .	\$38,851 63
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PROVINCE OF ALBERTA

REPORT ON TECHNICAL EDUCATION FOR YEAR ENDING MARCH 31, 1920

The problem of technical education in Alberta, as elsewhere, must be considered in relation to the basic or dominant activities of the people and special attention must necessarily be given to the scientific and mechanical aspects of these activities.

In Alberta the chief occupations of the people may be grouped under the following headings: Agricultural and pastoral activities, coal-mining, construction and operation of public utilities, railroads, power plants, etc., building operations, home-making, manufacturing, clay products, glass, clothing, etc.

The employments, which may be grouped under the foregoing headings, fall into classes requiring skill and technical training upon the part of those engaged therein. An appreciation of this has given rise to a widespread and manifest interest of the people in a further development of technical education in the province.

The following statements describe the main outlines of the work of technical and commercial education as at present carried on in the province.

TECHNICAL DAY SCHOOLS

Each Public School Board in the cities of Calgary and Edmonton maintains a technical school. The school in Calgary is designated as a prevocational school.

In each school pupils are admitted who have at least grade VII standing. In the prevocational school at Calgary the course of study carries students through grades VII, VIII and IX, while the technical school at Edmonton provides instruction for students wanting matriculation into the university. A special matriculation for such students is at present under consideration.

The academic subjects taught are as outlined in the departmental course of studies for similar grades in the public and high schools. In addition to these studies at the prevocational school, the girls receive instruction in household science, household arts, shorthand and typewriting; while the boys are taught printing, woodwork, forge work, sheetmetal work and leather work. For both boys and girls the instruction in these industrial and technical subjects occupies 50 per cent of the school day.

Notwithstanding that the pupils of this school spend only 50 per cent of their time on ordinary school subjects, the principal, Mr. Robert Massey, B.A., states that the pupils succeed in passing the examinations for entrance to high school, equally as well as pupils from other schools, and one of the pupils, Miss Charlotte Christoferson, won the Governors' medal in open competition.

The Edmonton Technical School offers four types of courses: (1) a prevocational course; (2) an industrial course; (3) a matriculation course; (4) special courses.

The practical work offered comprises mechanical drawing, woodwork, machine shop practice, printing, forging, gas-engine, assaying, sewing, dressmaking, cookery, textiles and textile chemistry and millinery.

The Edmonton School Board are at present considering the problem of providing new accommodation for the work carried on in the technical school under the principalship of Mr. J. M. Clindinin, B.A., who in his announcement states the aim of the school to be as follows:—

To offer to students the opportunity to develop their practical and mechanical tendencies and to become acquainted with the fundamental processes and principles underlying various avocations while pursuing the regular academic courses;

To provide facilities for those who will be engaged in industrial and domestic pursuits to acquire the necessary knowledge and skill which will fit them to do their work with greater intelligence and efficiency;

To give instruction to other persons who are able to attend only a part of the time to those subjects which will be of direct benefit in their daily work;

To co-ordinate the work of the school with the needs of the industries of the community.

COMMERCIAL DAY SCHOOLS

Instruction in commercial subjects is provided by the School Boards in Calgary, Edmonton and Lethbridge and provincial grants are made to each district to partly cover the cost of tuition.

Two courses are open to students and these are known as regular and special.

The regular course covers a period of two years, while the special course is covered in one year. The subjects taught in these courses include: book-keeping, shorthand, typewriting, commercial law, office practice, business English, penmanship, rapid calculation, English literature and composition, Canadian history and civics, and commercial geography.

In the short course students specialize in either stenography or book-keeping as a major subject.

The enrolment of students in these courses is greater in the first year of the two-year course than in the second year, and there is a considerable enrolment in the short course. Most of those taking the short course elect shorthand as the major subject for the reason that most of the students are girls and for the reason that the demand for stenographers exceeds that for book-keepers. In addition to those who enter the short course from other schools there is a considerable accession to this course from the two-year course at the end of the first year.

There is difficulty in retaining pupils in these courses because of inducements held out to them by business firms.

The staff at Edmonton numbers six (6) (in two centres), at Calgary, eight, and at Lethbridge, two. They are qualified for the work by teaching experience in secondary commercial schools or in business colleges and most of them hold the commercial specialist's diploma. One holds the intermediate chartered accountant's certificate and one the chartered accountant's degree.

NIGHT SCHOOLS IN CITIES

During the term, October to April (1919-20), night schools for adults were in operation in the cities of Calgary, Edmonton, Lethbridge and Medicine Hat, and a revival of activity is to be noted in all four cities.

The School Board of Calgary offered instruction in seven centres well distributed throughout the city. The subjects of instruction included commercial work, mechanical drawing, English and arithmetic. The total enrolment for the fall term was 342, of which 170 were enrolled in commercial work. The class in mechanical drawing consisted largely of apprentices from the Canadian Pacific Railway shops at Ogden.

Edmonton used three centres for night class instruction and offered a wide variety of subjects. The work is well organized and over 800 enrolled for courses. Instruction was given in the following subjects: Book-keeping, stenography, millinery, woodwork, machine shop practice, forging, gas-engine, costume design, interior decoration, design and showcard writing, English, mathematics, electricity, chemistry, English for non-English, and mechanical drawing.

Most of the courses are of ten weeks' duration and two terms of ten weeks make up the winter session. Students are allowed to enrol for attendance on two or three or four evenings each week in certain subjects. This enables them to do intensive work on special lines.

In Lethbridge, students were enrolled for preparatory work in English, mathematics, science and mining.

Medicine Hat offered instruction in commercial arithmetic, business forms, English, shop mathematics, mechanical drawing and lettering.

For a time during the war the operation of night schools in Calgary, Lethbridge and Medicine Hat was suspended. Edmonton carried on throughout the war. The work, resumed and increased during the past season, will in all probability be extended in scope and interest next year.

The Provincial Government pays 40 per cent of the cost of tuition in the night schools of these four cities.

NIGHT SCHOOLS FOR MINERS

There were 314 coal-producing mines in the province of Alberta during the year 1919 and approximately 6,000,000 tons were produced in 1918. In order to provide suitable instruction to miners, night schools are conducted at the larger mining centres by a co-operative arrangement between the local school boards and the Provincial Institute of Technology and Art at Calgary. To furnish instruction to miners in other centres the Provincial Institute carries on a correspondence course in mining. These two methods of instruction provide the means whereby the men working in the collieries may receive the education and technical knowledge necessary to obtain the certificates of competency required by officials under the Coal Mines Act and necessary also to improve their efficiency as miners.

The instruction is of a scientific and technical character and deals with such topics as geology, methods of working, explosives, safety-lamps, ventilation and air control, engines, generators, surface plant, machinery and surveying. In addition to work on the mechanics and science of mining, instruction is given also in preparatory English and mathematics to those who feel the need of help in these subjects and to those who would not profit fully by the technical instruction without such aid.

The Provincial Institute supplies each instructor with a set of lectures in the correspondence course. During the winter session (1919-20) night classes for miners

were held at the following mining centres: Bankhead, Bellevue, Blairmore, Coleman, Drumheller, Hillcrest Mines, Lethbridge, Lovett, Nordegg, Rosedale. As a rule two lessons were given to each class each week and the lessons were of two hours' duration. The instructor was the mine manager, or superintendent or some other official chosen because of his technical knowledge of mining, because of his aptitude for teaching, and also because of the confidence held by the miners in his competency. The instructors in the preparatory work were the teachers employed by the school board to conduct the regular day school work at the mining centres.

Liberal grants are made to school boards by the Provincial Government. A small fee is charged those in attendance and these fees together with the grants usually cover the cost of tuition. The board provides, without charge, the accommodation, heat, light and extra janitor service necessary.

Herewith is submitted a tabular statement showing the enrolment in night classes in the nine mining centres in operation during 1919-20. The session lasted from October 1 to March 31.

STATEMENT OF ENROLMENT IN CLASSES AT MINING CENTRES
INTERIM REPORT

Locality Year 1919-1920	Number of Classes	Enrolment of Classes				Total Enrolment
		Preparatory Subjects	1st Class Mining	2nd Class Mining	3rd Class Mining	
Bankhead.....	3	49			13	62
Bellevue.....	3	12	5	5	10	32
Blairmore.....	1	21				21
Coleman.....	4	18	10	13	16	57
Drumheller.....	1				14	14
Hillcrest Mines.....	1				14	14
Lovett.....	1				4	4
Nordegg.....	3	22		5	5	32
Rosedale.....	3	14			18	32
Total.....	20	136	15	23	94	268

CORRESPONDENCE COURSES FOR MINERS

Students are enrolled for three courses leading to the certificate required of officials under the Mines Act. Lectures are sent out to students as follows: For the first and second-class certificates, every Tuesday from October 1 to the end of March, and for the third-class, every alternate Tuesday within the same dates. The topics dealt with are those enumerated by the Mines Department. The certificates granted to successful candidates enable them to hold the following official positions: (a) manager, (b) overman, (c) fire boss.

During 1919-20 the correspondence students enrolled numbered one hundred and twenty-four (124).

The course is conducted by the Provincial Institute of Technology and Art at Calgary and the administrative and instructional staff at present number three who devote their whole time to the work.

Fees are charged students and all expenditures on salaries and maintenance are borne by the province.

The courses are of assistance to miners everywhere throughout the province, especially those working in mining centres where night classes are not as yet in operation.

LAND PURCHASE AT CALGARY

An agreement was entered into on July 3, 1919, by the Minister of Education for the purchase of a site at Calgary for a building to be known as the "Provincial Institute of Technology and Art." Plans have been prepared and tenders called for the building, one wing of which will be occupied by a normal school. The completed structure will cost in the neighbourhood of one million dollars.

Provision has been made for class-rooms, art and draughting rooms, home economics laboratories, rooms for commercial work, laboratories for science instruction and shops for work in wood, metal and power. There will be an auditorium, special rooms for teachers, lockers and assembly rooms for students, a power plant available for instruction in steam and electrical engineering and for fuel testing on a commercial scale.

The accommodation outlined above indicates broadly the nature of the work to be undertaken in the new institute. There will be courses for special teachers of practical work, for students in commerce and finance, in fine and applied arts, in home economics, and in the mechanic arts and engineering.

PROVINCE OF SASKATCHEWAN

REPORT OF VOCATIONAL EDUCATION FOR YEAR ENDING JUNE 30, 1920

As the urban population of Saskatchewan (centres with population over 3,000) is small compared to the rural population—the ratio being about 1 to 5—and there are no large industries, apart from agriculture, the field for technical education is very limited. Prior to the passing of the Technical Education Act no attempt was made to organize vocational classes in the province. Many of the high schools, however, have established elementary classes in domestic science, commercial work and manual training. It is proposed to extend and develop this work to meet the requirements of the Federal Act. In some cases practically no extension is necessary. Along certain lines this has already been done by the Regina Collegiate Institute. Next year it is probable that other high schools will do likewise. It is proposed to take advantage of the Federal grant wherever this is possible.

Early in February of the present year a Bill, known as the Vocational Education Act, was passed by the Provincial Legislature. This Act gives the Minister of Education authority to give special grants in aid of vocational education in the province. A copy of this Act is appended to this report. (See Appendix II.)

PROVINCE OF MANITOBA

REPORT ON TECHNICAL EDUCATION FOR YEAR ENDING MARCH 31, 1920

Technical education courses, recognized as coming within the scope of the Technical Education Act, 1919, were carried on in Winnipeg, Brandon, Virden, Dauphin and Stonewall during the year ending March 31, 1920.

In Winnipeg, day vocational classes were conducted in home economics, in the various branches of commercial work, and in printing. In addition to this, part-time instruction was given to apprentices in railway shops and printing establishments. Evening continuation work was carried on in commercial subjects, in the various branches grouped under the head of building trades, and in electrical work, forging, tinsmithing, machine-shop work, design, pattern-making, auto-mechanics, printing, telephony, and sign-writing. Classes were also conducted in the various branches of home economics. The technical work of the evening schools was chiefly confined to those already employed in their vocations. In addition to using equipment and class-rooms in the technical high schools, special apparatus was provided for evening classes for the accommodation of the large number of vocational students taking this work. Teachers were for the most part procured who were themselves engaged in industrial work and who had trade teaching experience. The extent of vocational and technical work undertaken by the Winnipeg School Board may be in some measure judged by the fact that the board made during the federal fiscal year an expenditure of \$37,030 for this purpose. This sum does not, however, by any means represent the total amount spent by the board upon technical education. In the Kelvin and St. John's technical high schools, with a total enrolment of well over 2,000 pupils, courses are offered in all of the above-named branches as part of the regular school work, i.e., a boy carries wood or metal working as a subject in his course, which may be leading him to arts matriculation or a teacher's certificate.

The academic work is enriched in order to assist the student in "finding himself" and to give him some real skill. Work of this nature does not at the present time, however, come under the Act.

In Brandon, technical work is confined chiefly to commercial subjects and home economics, although in the evening schools instruction is given in courses relating to the building trades. In Dauphin, Virden and Stonewall only day vocational work in home economics is offered.

The coming year may be expected to see some considerable development in technical education in Manitoba.

PROVINCE OF ONTARIO

REPORT OF THE DIRECTOR OF INDUSTRIAL AND TECHNICAL EDUCATION FOR YEAR ENDING DECEMBER 31, 1919

ADVANCE DURING THE YEAR 1919-20

The present year marks the most important advance made in industrial and technical education since the passing of the Industrial Education Bill of 1911.

The opportunities for instruction have been materially widened by the opening of new schools in a large number of centres and by a remarkable increase in attendance at both day and evening classes. The organization has been strengthened also by a more direct adaptation of courses to meet the needs of workers and industries. The extension of the facilities for training in many centres is restricted now only by the limitations in the accommodations and equipment available.

The Dominion Technical Education Act of 1919, which set aside ten millions of dollars for promoting and assisting technical education in Canada, and the more liberal provision made by the province through its present scheme of grants, have stimulated municipalities to enter upon an extensive programme of building operations.

But, unquestionably, the most important forward step taken during the year was the passing of the Adolescent School Attendance Bill of 1919. The Act secures to adolescents of all classes more equal and adequate opportunities for training and, at the same time, tends to increase our national resources by providing the means for rendering available for more effective service a much larger proportion of the potential talent in our youth.

EVENING SCHOOLS IN NEW CENTRES

Evening schools were opened during the year at Beamsville, Iroquois Falls, Kingston, Lindsay, Midland, Port Hope, Orillia, Oshawa, Sarnia, St. Thomas, Sturgeon Falls, Timmins, Walkerville.

The enrolment in these schools has been exceptionally large. The spontaneous response to the opportunities offered is an additional evidence of the important service to be rendered by evening schools.

Walkerville offers a typical illustration. Early in the autumn the department received inquiries from the School Board regarding the possibilities of evening classes. A member of the staff was sent to make a preliminary survey and to offer advice. The School Board took up the work of organization with energy, and its action was heartily supported by the management of the industries in Walkerville and Ford. An evening school was opened with the following enrolment: Machine shop practice 142, draughting 92, blue-print reading 30, electricity 13, stationary engineering 14, tool making 67, die making 22, dressmaking 39. Total 417. The management of the Ford Company placed temporarily at the disposal of the Advisory Industrial Committee its machine shops to provide accommodation and equipment for evening instruction in machine shop practice. The board has purchased an extensive equipment which will be used for this purpose as soon as it is installed.

Sarnia affords another illustration of the existence of a large and, perhaps, unsuspected field of service for evening schools. In 1917, and again in 1918, the Board of Education considered the matter of opening evening classes and went so far as to

send special deputations to other places to inquire into their working. However, it was felt that, partly on account of inadequate accommodation and partly on account of an apparent lack of public demand for instruction, the time was not opportune. Last autumn the question was again taken up by the board, and it was decided to make a beginning. The response was overwhelming; six hundred and eighty-five persons applied for the various forms of instruction offered. A day technical school will be organized when the new combined Collegiate Institute and Technical School is opened.

The importance of the organization of evening schools in such places as Iroquois Falls, Sturgeon Falls and Timmins in Northern Ontario should not be overlooked. These communities have important industries employing a large number of workers who need training, but they are far removed from the educational centres of the province. Evening schools, therefore, are proving to be of great assistance. The demand is mainly for instruction in English and in the theoretical and practical work connected with employments in the industries. The following list of classes at Timmins is of interest because it gives an indication of the varied needs of those applying for instruction: Machine drawing, arithmetic, shop mathematics, senior English, junior English for mixed nationalities, English for Finns, English for Chinese, sewing, chemistry.

INCREASE IN ATTENDANCE AT EVENING SCHOOLS

There has been a marked increase in the attendance at the evening schools that have been in operation for several years. As my reports have shown, a constant increase in attendance has been maintained from year to year in these schools throughout the war, but with the return of the men from overseas, special demands are being made for instruction. It would appear from the reports received at the department that the attendance during the year 1919-20 will probably be fifty per cent in advance of that for the previous year.

The enrolment does not include the attendance of partially disabled men receiving vocational training at day classes under the direction of the Soldiers' Aid Commission, but these classes have affected indirectly the attendance at evening schools, because many of the men who have completed day courses continue their instruction at evening classes. Moreover, the success of the day classes in fitting partially disabled men for occupation has induced a large number of men who do not qualify under the regulations of the Department of Soldiers' Civil Re-establishment for day class instruction to enter upon vocational courses at evening schools.

A WIDER ADAPTATION OF COURSES TO MEET THE NEEDS OF WORKERS AND INDUSTRIES

It has been the aim of the department through the organization of the industrial and technical schools to provide for a thorough training in the essentials of a general education as a basis for citizenship and vocational efficiency and, at the same time, to furnish specialized training in the subjects and operations which are fundamental to trades and industries.

The first of these aims has been very fully attained in connection with the day schools. A fair share of the time and attention of the organizers during the autumn was devoted to realizing more fully the second of these aims by assisting advisory committees and principals of schools in widening materially the field of theoretical and practical instruction offered, especially in evening class courses.

The more important extensions have been connected with providing courses for stationary and marine engineers, masters and mates, railroad employees, and electrical workers.

A new Act respecting licenses for stationary engineers came into effect on January 1, 1920. This Act grades engineers into four classes according to experience and technical knowledge. To provide an opportunity for men to obtain theoretical and practical instruction for the different grades of certificates, it was found advisable to organize evening classes in a number of the towns and cities. The

work was undertaken at the suggestion of the Canadian Association of Stationary Engineers, and it has had the hearty support of the Provincial Department of Labour.

Through the request of the National Association of Marine Engineers classes in marine engineering to prepare men for the higher grades of certificates have also been established. Such classes are now in operation in Sarnia, Owen Sound, Collingwood, Midland, Fort William and Kingston.

Classes for masters and mates to prepare for the examinations for the various grades of certificates have been organized in Port Arthur, Owen Sound and Sarnia. A school for navigation has been conducted for some years in Kingston, and schools under private auspices carried on in Toronto and Collingwood. The school in Collingwood under Captain Inkster has been taken over by the Advisory Industrial Committee. The masters and mates are, as a rule, free from duty during the winter months; accordingly the courses, which are of an intensive character, may be provided for in day classes.

The schools entered a new field this year in providing instruction for railway engineers, firemen and train hands in the operation of air brakes and other special equipment. A beginning was made in connection with the school at Lindsay. The railway companies are giving their support and assistance in providing charts and other equipment. This field will probably have important extensions in the future.

The rapid growth of the Hydro-Electric system in Ontario, and the consequent displacement of coal by electricity, is bringing into existence a new industry. The manufacture, installation and maintenance of electrical devices, transmission lines, generators, motors, transformers, and control devices is affording employment to an increasing number of workers. Many of these workers are stationary engineers, machinists, or handy men who have become engaged in the industry with an inadequate training for promotion in the work. The industrial and technical schools offer them an opportunity for instruction and many are taking advantage of it.

ORGANIZATION OF EVENING SCHOOL COURSES

The length and the type of evening school courses are receiving more attention from principals and advisory industrial committees. In some cases it has been found advisable to offer courses which extend throughout a year or even a succession of years. The technical schools at Toronto and Hamilton offer first, second, third and fourth year courses in a number of subjects and departments, and these courses are taken from year to year by students with the regularity that marks the progress of high school or university instruction. Other technical schools are beginning to offer extended courses of a similar nature. But the greater part of the work accomplished through evening school instruction has been done through short courses. Taking into account the needs of most communities, a short unit course designed to give instruction in some narrow, but well-defined field, is found to be, on the whole, the most effective means of evening school instruction. By arranging unit courses in sequence it may be made possible to lead students from topic to topic throughout a series in an extended course when they could not be induced to enter a course planned on the basis of long and continuous attendance. The units of such a course should be so arranged as to deal with one specific topic at a time and the instruction in each topic should, as far as possible, be complete in so far as it goes. In this way, the knowledge of definite accomplishment becomes an incentive to further progress.

The appendix to the Recommendations and Regulations of the department contain suggestive unit courses in a variety of subjects for men and women.

BUILDING OPERATIONS

The chief obstacle in the way of the establishment and extension of day schools has been the lack of accommodation. This obstacle will, in the near future, be removed in the case of most of the larger industrial centres.

The liberal grants offered by the Department of Education for buildings and equipment for technical education have made it possible for a number of municipalities to enter upon extensive building programmes. In some cases the schools proposed are to be made departments of the collegiate institutes or high schools; in others, they are to be established as independent institutions. Niagara Falls and Fort William have buildings in process of construction. Sault Ste. Marie, Sudbury, Sarnia, and Kitchener have decided to build and have their plans in various stages of completion. The large new central technical school at Toronto is already overcrowded and the Advisory Industrial Committee are considering plans for additional accommodations in a new school in the eastern part of the city. The question of building is being considered also by Belleville, the border cities (including Windsor, Walkerville, Ford, Sandwich and Ojibway), Brantford, Collingwood, Guelph, Owen Sound, Peterborough, St. Catharines, Stratford, and other municipalities.

ADOLESCENT SCHOOL ATTENDANCE ACT

The public possibly scarcely yet realizes the importance of the forward step taken by the Provincial Legislature last session in passing the Adolescent School Attendance Bill. We have been prone in late years to give attention in discussing the means for improvement in education mainly to the varying factors which modify instruction for those at present in attendance at elementary and secondary schools and we have overlooked the large body of young people who drop out of school at an early age. It is true that from time to time we have discussed the position of the 80 per cent whose education terminates with the public schools, but, in this connection, we have been concerned mainly in overcrowding the public school course of study in the interests of those who are expected to leave at fourteen years of age and we have failed to provide an adequate solution of the real problem involved, that of extending the period of education for all through some form of compulsory attendance. The aim of the Adolescent School Attendance Act is to make provision for such an extension.

I make the following quotations from a recent work, "Problems of National Education," by Twelve Scottish Educationists, edited by John Clarke, for two reasons, first, because they furnish an admirable summary of the needs, the principles involved, the scope, and the ends to be attained through such legislation as we have secured in Ontario and, second, because they show that we are attacking a problem which is not peculiar to one part of the Empire, and that our means of attack has the support of thoughtful and experienced educators in a country that, admittedly, has been foremost in educational thought and practice.

Better education and more education are an urgent necessity, national and democratic. We require to mobilize the intellectual resources of the nation against the arduous times that lie ahead, when 'parts' developed by education will be of more and more account. Experience tends to show, has indeed shown, that brains, capacity, talent—whatever name we prefer—are not the prerogative of any one class, but are diffused in an irregular and uncertain fashion through all classes, though unfortunately in many cases arrested, stunted, perverted through lack of training. All this store of potential capacity must be conserved for the nation. Every source of energy must be tapped. In order to recover the concealed gold, the whole body of ore must be treated. Every child of every grade of society must have his chance. No one will henceforth be precluded from the full advantages of education until he (or she) has proved his inability to benefit by them. Equality of opportunity will become a reality, so far as legislation can make it so. No distinction between higher and lower grade will be drawn artificially. It will be left to reveal itself automatically in process of treatment. Greater variety of method will be rendered possible and will be adopted. Material refractory under one course of treatment may respond to a different method. For example, many pupils, particu-

† From the article on Technical Education, by Dr. A. P. Laurie, Principal Heviot-Watt

larly boys, who appear to show no aptitude at all for school studies, the practical bearing of which they may fail to appreciate, not infrequently develop ability in some special direction when they are released from school, thrown on their own responsibility, and brought to concentrate attention on studies relative to their employment. And there are numerous other varieties of pupils for whom education at present does far less than it might do. The future will endeavour to prevent this waste and failure, and to secure for each and all their chances in life."

† "It is difficult to exaggerate the importance of the new principle embodied in the Education Acts for England and Scotland by which compulsory training for young persons during working hours is made operative. As has been already stated, the modern workshop no longer provides an adequate training for the apprentice by which he can become master of his craft, and the technical school has had to be satisfied with scraps and snippets of time in the evening and on Saturday afternoons and with tired pupils, incapable in very many instances of sustained effort. The state has been playing with the question of systematic technical education and wasting large sums of money with very inadequate results. Those responsible for technical education have long felt that no real progress was possible under the former system. The claim of part of the time for the workshop for systematic training is only just and right, and for the first time puts technical education in its proper place and gives it well-deserved opportunities.

"The results which will be obtained will, one feels confident, be remarkable. Every one responsible for education longs to deal with the young mind between the ages of fourteen and eighteen; each year shows a rapidly increasing mental capacity and ability to grasp principles. They are the most fruitful years intellectually, and the mental gain and the moral discipline which the pupil will obtain as a result of systematic study will be very marked.

"The new scheme is only a beginning, but it is a recognition of the right of the young of the working classes to education during those years, and a recognition also of the fact that technical education and a thorough knowledge of a handicraft are not matters to be despised, but worthy of the utmost consideration of the state. Whether regarded from its purely material aspects or from its importance as establishing the only possible principle upon which the great industrial democracy can attain a position of stability, the claiming of these hours for education marks the most important advance since compulsory elementary education was first introduced."

PROVISIONS OF THE ADOLESCENT SCHOOL ATTENDANCE ACT

Two plans have been adopted by different countries for the extension of the period of compulsory education of the youth beyond fourteen years of age: (1) to provide for compulsory full-time education beyond the period of fourteen years of age; (2) to provide for part-time education.

The aim of the Act is to combine the essential features of these two plans in so far as they are applicable to Ontario under present conditions. The provisions of the leading sections of the Act fall into three divisions:—

Division 1.—The provisions for the extension of the full-time education of adolescents from fourteen to sixteen years of age.

Where courses are established which will be of profit to adolescents, full-time attendance is compulsory for all adolescents between fourteen and sixteen years, except in cases where parents or guardians can show that the part-time employment of those under their care is a necessity.

Those necessarily at work must attend school at least 400 hours a year, but it is understood that the selection of the period of attendance can be so arranged as to be of the greatest advantage, both to young persons concerned and the services in which they are engaged. For example, young persons in rural sections who are

† From the article on Technical Education, by Dr. A. P. Laurie, Principal Heviot-Watt College, Edinburgh, p. 274.

necessarily employed on the farms during the busy seasons may, as was customary in pioneer days, attend school during winter months, when special courses can be arranged to meet their needs.

There has been a demand in some quarters for the full-time attendance, without exemptions, of all persons between fourteen and sixteen years of age, but it would appear that until the state provides more adequately for the support of orphans, widows, and dependents, there is a real necessity for certain adolescents between these age limits to secure employment. Moreover, a reasonable amount of work, especially in agricultural and industrial employments, under proper conditions, may be made to contribute directly to the educational development of the youth.

The purpose of this section of the Act is to ensure that all persons who are not necessarily employed are under instruction in an approved school when their educational status is not satisfactory.

Division 2.—The provisions for part-time instruction of adolescents between sixteen and eighteen years of age.

Adolescents between sixteen and eighteen years of age who have not attained a satisfactory educational status, and who are not in full-time attendance at an approved school or college, are required to attend part-time courses of instruction for an aggregate of 320 hours per year when such courses of instruction are established in the municipality in which they reside or are employed. But in this case also the hours of attendance may be distributed as regards times and seasons to suit the circumstances of each locality.

Division 3.—The provisions for the compulsory establishment of part-time courses of instruction.

The Act, in so far as it applies to the smaller urban municipalities and to rural school sections, provides that the establishment of part-time schools be optional with school boards. The organization of schools in these cases is made to depend upon voluntary efforts because the providing of an adequate and economical system of schools for the purpose would necessarily involve readjustments of the present school areas, and it is manifest that permanent readjustments can be effected only through the voluntary co-operation of all parties concerned. Any attempt to force a change in boundaries, through consolidation or otherwise, would but impede the movement for more satisfactory school organizations.

But the Act makes it compulsory for an urban municipality with a population of 5,000 or over to organize suitable part-time courses of instruction for adolescents.

In such municipalities the necessary courses for adolescents can be economically provided, either through the extension of the present high school courses or through the organization of additional schools, without involving modifications in established school areas.

Courses within the limits of the public and separate school course of study are to be provided by the boards in control of public or separate schools. Courses within the limits of the high school course of study are to be provided by the boards in control of continuation schools or high schools.

The vocational courses for those engaged in trades or industries are to be provided by and to be under the control of Advisory Industrial Committees, and the vocational courses for those engaged in commercial occupations are to be provided by and to be under the control of Advisory Commercial Committees, provided for in the Industrial Education Act.

The Act also makes provision for the machinery necessary to its effective operation, and for reimbursing municipalities that have established part-time courses of instruction through grants to be made from sums voted by the Legislature either for this special purpose or for industrial or agricultural education.

INDUSTRIAL, TECHNICAL AND ART SCHOOLS—DAY SCHOOLS

(I. TABLE N—ATTENDANCE.)

Day Schools	Number of teachers	Attendance					Number of Pupils from families whose head is occupied as below									
		Total number of pupils on the roll for the year	New pupils admitted during the year	Pupils admitted for the first time to a secondary school during the year	Boys on the roll	Girls on the roll	Days the school was open	Average daily attendance for the year	Commerce	Agriculture	Law, medicine, dentistry or the church	Teaching	The trades	Labouring occupations	Other occupations	Without occupations
1 Brantford Industrial School.....	6	13	9	9	13	.....	200	10	3	1	.....	.....	7	2	.....	.....
2 Chatham Industrial School.....	4	36	9	9	28	8	168	22	.....	.....	.....	.....	30	.....	6	.....
3 Haileybury, Mining Department of High School.....	6	40	29	19	39	1	164	24	6	1	1	.....	32	.....	.....	.....
4 Hamilton Technical and Art School.....	23	622	372	202	453	169	185	535	81	18	2	2	271	36	147	65
5 Kingston School of Navigation.....	4	17	17	17	17	.....	30	13	.....	.....	.....	.....	.....	.....	.....	.....
6 London Industrial and Art School.....	9	119	88	78	80	39	171	78	15	7	3	3	49	9	29	4
7 Ottawa Technical School.....	15	549	435	245	212	337	170	109	13	3	2	1	31	1	25	.....
8 Sault Ste. Marie Technical Dept. of High School.....	7	8	8	5	8	.....	30	6	.....	.....	.....	.....	4	2	1	.....
9 Sudbury Mining Dept. of High School.....	3	30	15	15	30	.....	172	24	3	1	.....	2	3	17	3	1
10 Toronto Technical and Art School.....	76	3,266	2,343	618	2,103	1,163	179	1,689	374	36	59	12	342	35	208	150
11 Windsor Industrial School.....	2	39	23	22	29	10	179	24	11	.....	.....	14	14	9	4	1
Totals, 1918-1919.....	155	4,739	3,348	1,239	3,012	1,727	.....	2,534	506	68	67	20	783	111	423	221

INDUSTRIAL, TECHNICAL

II. TABLE O—

Night Schools	Number of Teachers	Attendance							Nights the school was open
		Total number of pupils on the roll for the year	New pupils admitted during the year	Boys and men on roll	Girls and women on roll	Pupils whose birthplace is Canada	Pupils whose birthplace is the British Isles	Pupils who were born in other countries	
1 Almonte.....	7	63	63	20	43	48	13	2	41
2 Arnprior.....	2	21	14	.....	21	21	.....	.....	24
3 Belleville.....	17	264	264	109	155	211	45	8	41
4 Brantford.....	12	553	400	337	216	367	162	24	45
5 Brockville.....	11	165	103	62	103	139	25	1	41
6 Chatham.....	17	405	405	145	260	365	33	7	82
7 Cobourg.....	5	76	61	28	48	71	5	.....	72
8 Collingwood.....	9	102	92	55	47	76	18	8	91
9 Coniston.....	3	18	6	18	.....	14	3	1	24
10 Dundas.....	7	90	66	44	46	61	26	3	80
11 Fort William.....	12	155	120	83	72	74	38	43	51
12 Galt.....	9	277	246	115	162	162	105	10	125
13 Gananoque.....	7	58	48	15	43	52	5	1	35
14 Goderich.....	4	116	78	8	108	106	9	1	182
15 Guelph.....	17	305	225	98	207	221	72	12	42
16 Hamilton.....	37	1,315	910	752	563	623	458	234	72
17 Ingersoll.....	5	52	37	16	36	47	5	.....	48
18 Kitchener.....	16	233	209	61	172	202	9	22	69
19 London.....	25	1,092	967	583	509	770	279	43	72
20 Newmarket.....	4	44	35	20	24	29	15	.....	70
21 Niagara Falls.....	9	302	279	152	150	162	103	37	106
22 Ottawa.....	45	2,191	1,592	653	1,538	1,752	311	128	138
23 Owen Sound.....	17	355	197	116	239	244	104	7	76
24 Pembroke.....	11	87	51	23	64	77	6	4	60
25 Peterborough.....	12	214	86	103	111	153	51	10	61
26 Port Arthur.....	20	198	124	119	79	114	42	42	40
27 Renfrew.....	6	166	86	31	135	151	7	8	125
28 St. Catharines.....	6	135	103	49	86	83	44	8	75
29 Sault Ste. Marie.....	14	108	80	75	33	42	16	50	75
30 Stratford.....	9	279	100	129	150	172	100	7	148
31 Thorold.....	6	49	35	37	12	22	20	7	37
32 Toronto.....	184	6,476	2,969	2,922	3,554	3,928	2,002	546	110
33 Welland.....	6	78	65	58	20	35	30	13	41
34 Whitby.....	7	67	42	8	59	44	20	3	141
35 Windsor.....	21	482	424	281	201	309	82	91	98
36 Woodstock.....	12	142	117	78	64	109	30	3	37
Totals, 1918-19....	611	16,733	10,699	7,403	9,330	11,056	4,293	1,384	.....

AND ART SCHOOLS—NIGHT SCHOOLS

ATTENDANCE

Occupations of pupils on entering school

	Textile Industries	Chemical Industries	Sheet Metal Work	Machine Shop Work	Forge Work	Foundry Work	Leather Work	Cabinet Making and Joinery	Carpentry and Building Construction	Painting and Decorating	Plumbing	Power Plant Operating	Electrical Work	Printing or Bookbinding	Photography, etc.	Other Trades	Art and Design	Women at work in factories	Women at work in shops and stores	House Workers	Housekeepers	Other Occupations	Without Occupation
1	37															2			4	1	8	9	2
2																					5	2	14
3		1	8	22	2	6			2	5	3			4				2	30	36		105	23
4		3	10	120	10	6	5	4	12	8	3	15	18	15	3	70	5	85	30	16	75	30	10
5				6		9		3	2		3		1			38		13	23	7	47	13	
6				20					1					2		47		10	52	10	22	201	40
7																3		1	5	13	1	48	5
8		1	1	28	5	7					1		1	1						11	14	32	
9		2	2					3			1		2		8								
10				15				8				3		1		1		10			14	33	5
11				9		5		3	3			7	8			48		5		7	40	20	
12			6	83		2	3						1	1				39	6		94	42	
13				16					1									2	17		16	6	
14				5														5	20	8	36	21	21
15				14		7	1	1	8	2	1		1	2		14	3	32	17	14	8	122	58
16		2	3	128	2	12		1	15	2	19		72	25	3	186	3	13	18	9	2	554	246
17				11				1								4		9	2		7	18	
18				10			18	8	2		11	2	3	1	1	41		23	10	10	18	67	8
19			12	76	4	17	7	7	20	14	15	9	17	26		83	6	67	19	30	163	370	130
20							2	8	1							4		12		3	8	6	
21		3	2	29				8			1	14	11	1		9		28	1	1	85	55	54
22		2	5	63	1		1	1	9	2	17	5	15	53	1	54	6	7	165	590	22	1,172	
23			2	32	1			20					1	2		42		22	20	11	112	77	12
24				9		1			1		1					5		2	3	9	44	6	2
25				10									46		1	46		9	31	6	30	27	8
26			2					3					14			23			18	5	24	87	
27				2					2									14			79	25	28
28		1		14	2	3			1	1	1	1	12			4		11	5		51	27	1
29		14	12	3					1					3		2			6	3	18	46	
30				79				19			2				1			50	22	3	26	56	21
31		2		4					4				1	1		25		1	2		7	1	1
32		91	14	501	15	21	17	39	117	20	52	44	250	141	26	282	53	424	1,698	149	424	1,709	389
33		8	3	19	4				3	1				2		2		1	4	4	4	23	
34				2										1				11	27	2	14	2	6
35		3	4	57	3	2		2	7		13	3	13	3	3	20		28	31	7	53	218	12
36			1	22	3	5		4						6	1	13		5	7	4	25	43	3
	37	132	88	1,437	52	103	54	135	220	55	145	107	497	284	47	1,073	76	941	2,303	969	1,601	5,273	1,104

INDUSTRIAL, TECHNICAL AND

III. TABLE P—

Day and Night Schools	Receipts				
	Legislative Grants	Local Municipal Grants	School Fees	Balances and other sources	Total Receipts
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1 Almonte.....					
2 Arnprior.....	143 79		29 00		172 79
3 Belleville.....		671 79	210 51		882 30
4 Brantford.....	1,862 68	1,034 74			2,897 42
5 Brockville.....	1,185 87	600 00		140 90	1,926 77
6 Chatham.....	5,400 62	11,540 20	459 55	195 82	17,596 19
7 Cobourg.....	646 94	900 00	8 00	55 97	1,610 91
8 Collingwood.....	432 90	213 90	86 00		732 80
9 Dundas.....	741 35	289 96	176 00		1,207 31
10 Fort William.....	635 19	450 91	44 00		1,130 10
11 Galt.....	961 47	439 46	662 50		2,063 43
12 Gananoque.....	344 04	No	report received		344 04
13 Goderich.....	622 67		104 00	8 92	735 59
14 Guelph.....	896 29	1,084 95	200 00		2,181 24
15 Halleybury.....	7,000 00			10,126 75	17,126 75
16 Hamilton.....	16,495 96	50,008 00	1,417 75	167,613 38	235,535 09
17 Ingersoll.....	679 40	300 00	184 25	986 62	2,150 27
18 Kingston.....	325 00			1,195 24	1,520 24
19 Kitchener.....	1,211 86	1,263 15			2,475 01
20 London.....	11,965 94	31,809 35	1,635 25	3,104 27	48,514 81
21 Newmarket.....	453 61	132 20	34 00	32 34	652 15
22 Niagara Falls.....	1,400 39	592 07	250 00		2,242 46
23 Ottawa.....	11,631 72	13,553 63	1,364 79	442 61	26,992 75
24 Owen Sound.....	1,085 90	812 32	24 00	4 20	1,926 42
25 Pembroke.....	1,239 43	341 42			1,580 85
26 Peterborough.....	1,014 02	1,500 00	128 17	105 56	2,747 75
27 Port Arthur.....	962 31	652 82	405 00		2,020 13
28 Renfrew.....	706 73				706 73
29 St. Catharines.....	768 60	966 40		560 14	2,295 14
30 Sault Ste. Marie.....	991 45	412 92	150 00	688 11	2,242 48
31 Stratford.....	668 19	340 70			1,008 89
32 Sudbury.....	7,273 70			4,858 42	12,132 12
33 Thorold.....	556 27		18 00	55 53	629 80
34 Toronto.....	21,775 00	197,429 92	13,217 00	34,703 09	267,125 01
35 Welland.....	1,073 11	906 31	134 00		2,113 42
36 Whitby.....	603 57	220 23			823 80
37 Windsor.....	5,967 94	10,530 31	1,187 10	3,409 09	21,094 44
38 Woodstock.....	913 10	51 18	197 50	11 55	1,173 33
Totals, 1918.....	110,637 01	329,048 84	22,326 37	228,298 51	690,310 73

ART SCHOOLS—DAY AND NIGHT SCHOOLS

FINANCIAL STATEMENT

Expenditure					
Teachers' Salaries	Building, sites and all permanent improvements	Repairs to school accommodation	Library maps and charts, all apparatus and equipment	School books, stationery, prizes, fuel, examinations and all other expenses	Total expenditure
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1					
2	144 00			6 00	150 00
3	706 00		120 55	55 75	882 30
4	2,265 72		131 70	500 00	2,897 42
5	1,242 00		60 00	482 72	1,784 72
6	7,410 07	1,369 56	4,670 46	2,159 89	15,609 98
7	482 00	120 00	500 68	207 95	1,310 63
8	494 03	7 09		227 71	728 83
9	882 55		43 64	254 81	1,181 00
10	793 00			322 95	1,115 95
11	1,680 05	100 00	72 30	203 73	2,056 08
12				344 04	344 04
13	568 00		6 00	109 89	683 89
14	1,310 00		434 85	436 39	2,181 24
15	5,064 11	1,048 71	4,920 39	1,509 18	12,542 39
16	31,603 75	47,676 75	322 90	5,303 66	99,860 88
17	761 00			259 18	1,020 18
18	800 00	250 00	16 47	448 92	1,520 24
19	1,752 40	240 00	166 13	316 48	2,475 01
20	18,358 15	2,000 00	2,096 38	22,254 26	44,708 79
21	494 50		11 35	146 30	652 15
22	1,774 30		263 28	185 23	2,222 81
23	16,315 00		6,081 27	4,473 78	26,870 05
24	1,108 25	544 83	14 55	258 79	1,926 42
25	1,303 99		80 01	180 25	1,564 25
26	1,232 00		340 69	250 00	1,822 69
27	1,394 00		500 91	96 00	1,990 91
28	355 00		306 95	30 00	691 95
29	966 32		121 95	401 06	1,489 33
30	1,296 87			305 08	1,601 15
31	983 53			25 36	1,008 89
32	5,300 00		1,062 34	523 90	6,886 24
33	429 75			110 27	540 02
34	128,934 09	11,893 91	518 61	7,943 00	234,249 98
35	627 32		1,482 73	84,960 37	2,110 05
36	558 00	103 20	31 50	117 00	809 70
37	5,922 40	118 63	3,185 67	3,309 67	12,536 37
38	765 50		355 33	52 50	1,173 33
246,076 85	64,096 03	2,234 63	40,313 12	140,479 23	493,199 86

PROVINCE OF QUEBEC
ANNUAL REPORT ON TECHNICAL SCHOOLS FOR THE YEAR 1918-19
MONTREAL TECHNICAL SCHOOL

Day Courses

The effects of the European war: conscription, high cost of living, the great demand for young men in munitions factories, were felt in connection with the number of our students, the total attending the day course having been only 176, as follows:—

	French section	English section
First year.	53	38
Second year.	28	18
Third year.	26	13
	<hr/> 107	<hr/> 69

The first-year students, English and French, were divided into two sections.

The matriculation examinations were fairly satisfactory. Teachers seem to take an increasing interest in preparing their pupils for the technical schools.

The number of scholarships awarded was 45, distributed by fractions among 62 students.

During the influenza epidemic in Montreal, the courses had to be interrupted between the 8th October and 12th November, 1918, and this had an effect on the general results.

Discipline was satisfactory, but it is more difficult to have order owing to the re-education work undertaken for soldiers in the school itself.

The average general attendance was 90 per cent.

The special day course for automobile machinists was attended by 48 students. This course will be considerably extended next year.

Other special courses in manual work (mechanics, foundry, modeling) were organized for French-Canadian returned soldiers, with the concurrence of the military authorities.

Night Courses

These courses, which usually last six months, practically lasted until the month of May, owing: (1) to the interruption due to the influenza epidemic; (2) to the necessity of repeating certain courses on account of the many applications received.

The total number of students who followed the courses for which fees had to be paid, amounted to 800 this year; they were divided as follows:—

Courses	English Section	French Section	Total
Fitting, preliminary.	52	57	109
" advanced.	21	24	45
" Monday.	49	26	75
" " theoretical. . . . .	..	9	9
Auto, preliminary—Tuesday.	21	25	46
" " —Thursday.	24	28	52
" " —Friday.	24	25	49
" advanced—Wednesday.	11	12	23
" prel. supplementary.	32	31	63
" day practice—1st series.	4	9	13
" " 2nd series.	7	6	13
" " 3rd series.	8	13	21
Drawing preliminary.	44	30	74
" advanced.	22	..	22
Electricity, theoretical.	20	27	47
" practical.	27	12	39
Stationary engineers.	9	7	16
Auto genius and soldering—1st series.	21	4	25
" " " —2nd series.	18	6	24
" " " —3rd series.	5	9	14
Joinery.	2	7	9
Foundry.	4	8	12
	<hr/> 425	<hr/> 375	<hr/> 800

The average attendance was $73\frac{1}{2}$ per cent.
 100 certificates and 21 medals were awarded.
 The number of lessons given was 1,107.
 497 for theoretical courses.
 610 for practical courses.

QUEBEC TECHNICAL SCHOOL, 1918-19

The Quebec Technical School has just completed its eighth year of teaching.

The number of students was smaller this year for the same reasons as in Montreal, especially as regards young men from the country, and this seems to be one of the effects of the Military Service Act.

The number of students, when the school opened for the year, was 85, as follows:—

	French section	English section
First year.. . . .	42	3
Second year.. . . .	23	4
Third year.. . . .	11	2
	<hr/> 76	<hr/> 9

The average attendance was 85 per cent.
 The school was closed for six weeks owing to the influenza epidemic.
 The falling off in the number of students during the year was 27 per cent.
 Work and discipline were satisfactory.

EVENING COURSES, 1918-19

There were night courses from the month of October, 1918, to the month of May, 1919.

The number of students who followed them was 117, being an increase of 20 over last year.

They were divided as follows:—

Course	English Section	French Section	Total
Machinists.. . . .	35	1	36
Automobiles.. . . .	52	..	52
Industrial drawing.. . . .	15	3	18
Electricians.. . . .	11	..	11
	<hr/> 113	<hr/> 4	<hr/> 117

The average attendance was 77 per cent.
 Thirty-nine certificates were awarded for the night course.

SHERBROOKE TECHNICAL SCHOOL

Students: day 8, evening 42.

Teachers, 3.

Of the eight students of this year, two intend going to polytechnical school, four intend going to technical school, two intend taking decorative drawing.

Subjects Taught

Mathematics, elementary, cosmography, simple and applied mechanics, physics and their application to industry, chemistry and its application to industry, mechanical, architectural and ornamental drawing, technology in connection with machinery construction, industrial book-keeping, notions of economics and hygiene, reviewing French and English authors.

TECHNICAL SCHOOL AT BEAUCEVILLE, YEAR 1918-19

Teaching of sciences and drawing is carried on in an efficient way. Unfortunately, the difficulty of finding board in Quebec is the reason that Beauceville does not send students to the Quebec Technical School.

The results obtained, however, are appreciable, and the annual grant may be given to this institution, which certainly deserves it.

SCHOOL FOR HIGHER COMMERCIAL STUDIES AT MONTREAL, YEAR 1918-19

Enrolment.—The number of students enrolled for the school year 1918-19 was 126, as follows:—

Preparatory class.. . . .	15
First year.. . . .	24
Second year.. . . .	11
Third year.. . . .	7
Unattached students.. . . .	3
Students in classes for Spanish.. . . .	66
	<hr/>
	126

The attendance was very regular.

Examination.—Six students presented themselves at the final examination and all obtained the diploma of Licentiate in Commercial Sciences, namely: Messrs. Wilfrid Dugal, with the greatest distinction (gold medal); Léon Côté, with great distinction (gold medal); Jean Marc Lalonde, with great distinction (gold medal), DeLigny Labbé, with great distinction (gold medal); Eugène Lavigne, with great distinction (gold medal); Georges Marcel Lalonde, with satisfaction.

Examination of expert accountants.—Examinations for accountant experts took place in the school during the week of the 7th April, 1919. The special jury convened for these examinations in accordance with the provisions of the Act 8 George V, chapter 44, consisted of the following: Messrs. H. Laureys, Director of the School; E. Montpetit, titular professor at the School; V. Doré, associate professor at the School; J. Hutchison, delegate of the "Association of Accountants in Montreal"; L. A. Caron, delegate of the Institute of Accountants and Auditors of the Province of Quebec.

The diploma of Licentiate in Accountancy was awarded Mr. Louis Parenteau, of St. Robert.

Scholarships.—Four students paid the class fees. The others had scholarships given by the Government.

Visits to industrial establishments.—These were made concordantly with the subjects taught in the course of industrial technology and merchantable products, as follows:—

1. Elevators in Montreal Harbour.—Grain warehouses.
2. St. Lawrence Flour Mills Co.—Flour milling.
3. C. H. Catelli & Co., Ltd.—Macaroni and similar products.
4. Viau & Frère.—Biscuits, chocolate, candy and factory.
5. Jas. Strachan.—Bakery.
6. Swift & Co.—Cold storage, meat, canned foods, etc.
7. St. Lawrence Sugar Refineries.—Sugar refining.
8. Frontenac Brewery, Ltd.—Brewing.
9. Canada Linseed Oil Mills Co.—Linseed and oil cake.
10. J. Barsalou & Co.—Soap factory.
11. Daoust, Lalonde & Co.—Tannery.
12. Daoust, Lalonde & Co.—Boots and shoes factory.

13. Canadian Consolidated Rubber Co.—Sundry rubber goods factory.
14. Dominion Textile Co.—Cotton mills.
15. Belding, Paul Corticilli Co.—Silk and ribbon factory.
16. Liquid Air Soc.—Liquid air.

Library.—The library now contains 4,823 volumes and a great many pamphlets. The number of industrial, financial and commercial periodicals received for the library has considerably increased since last year. By dint of much effort we have succeeded in having nearly 400 of the most interesting magazines relating to industry sent to us free of charge. The library subscribes to about 50 other periodicals. This constitutes a truly remarkable collection, unique in Canada. It will, in future, be one of the school's treasures. The list of these periodicals is in the school's year-book.

Commercial and Industrial Museum.—Similar progress has been made during the year in connection with the organization of the Commercial and Industrial Museum, for which we have received valuable aid from the Department of Colonization, Mines and Fisheries of the Province of Quebec. After a voluminous correspondence with the principal commercial and industrial organizations in Canada and the United States, we succeeded in obtaining a fairly good number of samples for the museum. The Government of the French Republic has given our institution a splendid collection of Sevres vases valued at a million dollars.

Our museum now contains about 4,600 samples of various kinds of raw material, such as ores (iron, copper, zinc, lead, aluminium, asbestos, feldspar, mica, etc.), rubber, gums, resins, oils, fats, various textiles (animal and vegetable), furs, cocoa, spices, teas, coffees, sugars, various cereals, etc. It likewise contains some 40 complete technological collections.

COUNCIL OF ARTS AND MANUFACTURES OF THE PROVINCE OF QUEBEC

During the year ten (10) schools have been opened throughout the province in the following places:—

	Number of classes	Number of pupils	Average attendance
Montreal.. . . .	18	1,374	691
Three Rivers.. . . .	5	149	62
Sherbrooke.. . . .	3	122	48
Saint-Hyacinthe.. . . .	6	111	58
Valleyfield.. . . .	3	80	69
Saint-Romuald.. . . .	1	37	19
Lévis.. . . .	2	37	23
Saint-Johns.. . . .	1	19	10
Lachine.. . . .	1	19	11
Chicoutimi.. . . .	1	18	10
	42	1,966	1,001

Notwithstanding the conditions caused by military regulations calling young men to the colours, the general depression of affairs and the epidemic of influenza which has forced us to suspend the schools for the greater part of October and November, the attendance has been highly satisfactory. It will be noticed in this report that many of the schools have been kept open later in the spring than in the past.

During the year petitions have been received from La Tuque, Lauzon, near Lévis, and Joliette, asking the establishment of drawing classes, the municipal authorities of these localities being willing to place at our disposal suitable rooms, together with the heating and lighting of same, without any outlay to our council. From information obtained we have every reason to believe that the establishment of classes in places mentioned would meet with success and the opening of same is projected for the next fall. The demand made by the National Workingmen's Union of Lauzon for industrial drawing classes is supported by the member of the Legislative Assembly for Lévis, M. A. Roy.

Details are given herewith with each school:—

Montreal School

This school was opened on the 7th October, 1918, and closed on the 16th April, 1919.

The following classes were in operation:—

Classes	No. of Pupils	Average Attendance
"Monument National Building"—		
Freehand drawing, elementary.. . . .	130	70
Freehand drawing, superior.. . . .	140	75
Architectural drawing.. . . .	27	13
Mechanical drawing.. . . .	61	27
Lithography.. . . .	15	9
Modelling.. . . .	58	31
Sign painting and lettering.. . . .	62	23
Joinery, carpentry and stair building.. . . .	25	8
Solfeggio.. . . .	159	96
Dress cutting, dress making, millinery.. . . .	505	216
Freehand drawing, painting (day class).. . . .	88	46
St. Lawrence Market—		
Plumbing.. . . .	43	33
145 Charron Street—		
Mechanical drawing.. . . .	36	28
C.P.R. Angus Works—		
Mechanical drawing.. . . .	25	16
	1,374	691

Owing to the influenza epidemic, by order of the municipal authorities the classes were closed from the 8th October to the 12th November.

The Canadian Pacific authorities have again kindly provided without any outlay to our council a comfortable room with a complete installation for the classes held at Angus works. They have also supplied the pupils, free of charge, the necessary drawing material for the school term.

The president and members of the Montreal Committee, accompanied by representatives from the press, have visited the classes on several occasions.

Three Rivers School

This school was opened on the 3rd December, 1918, and closed on the 22nd April, 1919.

The following subjects were taught:—

Classes	No. of Pupils	Average Attendance
Freehand drawing, first course.. . . .	28	12
Freehand drawing, second course.. . . .	28	11
Joinery, carpentry, stair building.. . . .	39	16
Sign painting and lettering.. . . .	40	15
Painting (day course).. . . .	14	8
	149	62

It is a pleasure to mention that the School Commission is taking a great interest in the maintenance of the school by defraying the expenses in connection with the heating and lighting as well as providing large and suitable rooms for carrying on the classes. The School Board has also supplied the necessary material to the various classes and generously offered valuable prizes to the most deserving pupils.

Sherbrooke School

This school was opened on the 15th November, 1918, and closed on the 18th April, 1919.

Lessons were given in the following branches:—

	No. of Pupils	Average Attendance
Architectural and freehand drawing..	45	10
Mechanical drawing..	77	38
	<hr/> 122	<hr/> 48

The city council has again taken an interest in the welfare of the classes by defraying a portion of the rent of the school rooms.

It is agreeable to state that the school is well supported by the population and manufacturers who give the apprentices attending regularly the benefit of a reduction of one day from the term of their apprenticeship for each lesson received at the school on presentation of certificate signed by the officers of this council and by the teachers.

St. Hyacinthe School

This school was opened on the 18th November, 1918, and closed on the 15th April, 1919.

The classes were the following:—

Classes	No. of Pupils	Average Attendance
Freehand drawing..	23	9
Painting..	20	11
Architectural drawing..	5	4
Mechanical drawing..	7	5
Joinery, carpentry, stair building..	34	14
Painting (day)..	22	15
	<hr/> 111	<hr/> 58

Valleyfield School

This school was opened on the 2nd October, 1918, and closed on the 28th March, 1919.

The following branches were taught:—

	No. of Pupils	Average Attendance
Architectural drawing..	33	26
Mechanical drawing..	27	25
Carpentry..	20	18
	<hr/> 80	<hr/> 69

As formerly a large and spacious hall well adapted for the purpose was graciously put at our disposal by the municipal authorities, together with the heating and lighting of same.

St. Romuald School

Mechanical drawing lessons were given to thirty-seven (37) pupils enrolled, with an average attendance of nineteen (19) pupils, from the 9th October, 1918, to the 13th March, 1919; the class was suspended from the 11th October to the 12th November, on account of the epidemic of influenza.

Our resident members for Lévis have the direct supervision of this school.

The free use of the town hall is kindly given to our board with the heating and lighting of same.

Lévis School

This school was opened on the 7th October, 1918, and closed on the 27th January, 1919.

The following classes were in operation:—

	No. of Pupils	Average Attendance
Freehand drawing..	20	11
Mechanical drawing..	17	12
	37	23

The City Council of Lévis granted gratuitously the use of a room, heated and lighted, in the upper part of the city hall, for the holding of the classes.

A display of the drawings executed is projected for next fall, and our resident members will endeavour to encourage the working classes to take advantage of the classes.

Saint Johns School

This school, consisting of one class in mechanical drawing, was opened on the 19th November, 1918, and closed on the 21st January, 1919. Nineteen pupils were enrolled with an average attendance of ten (10) for the year.

As our council has no official representative in this place, a local committee, having as president the mayor of St. Johns, took charge of the school and made visits during the school term.

The Catholic School Commission has graciously provided a large and comfortable room in the Commercial Academy, together with the heating and lighting of same.

Lachine School

Architectural and mechanical drawing were the subjects taught to nineteen (19) pupils, with an average attendance of eleven (11), from the 2nd December, 1918, to the 15th April, 1919.

Having no representative in this place, the School Commission took an interest in the operation of the classes.

Most appropriate rooms in the new college building, together with tables, besides the cost of lighting and heating, were kindly placed at our disposal by the School Commissioners.

Chicoutimi School

This school was put into operation on the 6th November, 1918, and was closed on the 12th March, 1919. Lessons in mechanical drawing were given to eighteen (18) pupils inscribed, with an average attendance of ten.

The municipal council have appointed a local committee, having as president the mayor of the place, to supervise the school.

The class room is furnished free of cost, as well as the heating and lighting, by the municipal authorities.

Summary

Our Board has thought it interesting to submit as follows a statement showing the age, sex and nationality of the pupils in each school. It can be noticed that very few pupils are under fifteen (15) years of age—it is less than four per cent (4%)—and the majority is over eighteen (18) years of age.

Schools	Under 15	15 to 18	19 and 20	21 to 25	26 to 30	31 to 36	36 to 40	41 to 45	46 to 50	51 to 55	61 to 65
Montreal. . . . .	..	563	194	271	164	72	65	28	12	1	4
Three Rivers.	3	71	28	19	12	8	1	1	..	..	..
Sherbrooke.	14	62	13	12	8	8	2	..	3	..	..
Saint-Hyacinthe.	6	68	14	17	6	..	..	..	..	..	..
Valleyfield.	2	66	3	5	..	3	1	..	..	..	..
Saint-Romuald.	26	8	2	..	..	..	..	1	..	..	..
Lévis	11	15	3	6	1	1	..	..	..	..	..
Saint-Johns	5	11	1	1	1	..	..	..	..	..	..
Lachine. . . . .	..	12	1	3	2	..	..	..	1	..	..
Chicoutimi. . . . .	..	6	4	1	2	2	..	3	..	..	..
	67	882	263	335	196	94	73	33	17	1	4

Summary.—Concluded

	English	French	Females	Males
Montreal	413	961	846	528
Three Rivers	2	147	42	107
Sherbrooke	67	55	..	122
Saint-Hyacinthe	1	110	43	68
Valleyfield	14	66	..	80
Saint-Romuald	3	34	..	37
Lévis	3	34	..	37
Saint-Johns	2	17	..	19
Lachine	2	17	..	19
Chicoutimi . . . . .	..	18	..	18
	507	1,459	931	1,035

PROVINCE OF NEW BRUNSWICK

FIRST ANNUAL REPORT OF THE VOCATIONAL EDUCATION BOARD

INTRODUCTION

The New Brunswick Vocational Education Department was established in May, 1919. This report gives a brief sketch of events leading up to its formation, shows in outline the plans adopted by the Vocational Board for the school year 1919-20, and indicates the progress made in applying this programme during the first term of that year. In addition, some reference is made to the progress of the vocational education movement abroad; to the Dominion Technical Education Act, and to some problems connected with the development of vocational training in New Brunswick.

OUTLINE OF PLANS OF VOCATIONAL BOARD

The Vocational Act defines vocational education as that education the controlling purpose of which is to fit for useful employment. This the board interpreted to include training that will not only increase the productive efficiency of the earner, but also broaden and develop his civic intelligence. It has a social as well as an economic aspect.

Further, the Act prescribes that it is the duty of the board to aid in the introduction of vocational education; providing day classes for those 14-25 years of age and evening classes for those over 16. As it is to be done at public expense, the implication is that it is to be made general as far as is possible throughout the province.

This places upon the board the obligation to devise means which will bring some form of a vocational education service within the reach of every citizen over 14 years of age, who is not availing himself of the general education programme which has long been provided.

Kinds of Schools

As a beginning towards working out such a programme the Vocational Board will encourage the establishment of the following: (a) pre-vocational schools; (b) day vocational schools; (c) part-time schools; (d) evening vocational schools; (e) itinerant schools; (f) a correspondence school.

(a) Pre-vocational Schools

It is well known that boys and girls leave school in alarming numbers between the ages of 12 and 14 years. They are too young to undertake vocational training, therefore pre-vocational work of a practical interesting nature should be given here to hold them in school to give them a useful developmental experience and enable them wisely to select the most suitable vocations.

(b) Day Vocational Schools

Our common school programme implies, and legislation may be invoked to compel boys and girls in New Brunswick to remain in school till they have either completed grade VIII or attained the age of 14 years. Under modern conditions this is not sufficient. At this stage they have neither the physical development to enter industry nor enough general education to bring them to their best as citizens. Their education should be continued.

The 90 per cent who drop out of school here must be given a vocational high school course. This will give them the required intellectual development and fit them for life's work. The board therefore very strongly favours day vocational schools organized on the following basis: (1) that all boys and girls 14 years of age and capable of profiting by the instruction shall be admitted. (2) That the school shall be 6 hours in length. (3) That 50 per cent of the school time shall be devoted to practical work on a productive basis, in the vocation selected; 25 per cent to the technical and scientific phases of said vocation, and the remainder to such citizenship subjects as English, French, history, music, civics, health, and the fundamentals of business.

In the larger centres these schools will be organized in separate buildings. In smaller places they will take the form of special departments in existing high schools. They should form the main feature of a vocational system.

(c) Part-time Schools

These are schools attended by adolescents or other workers for a certain portion of each day, week, month, or year, during working hours. Technical and citizenship subjects only are given. Vocational skill is asquired on the job. The teachers and courses should be specially adapted. This kind of school is economical and efficient and its introduction is strongly urged by the Vocational Board where conditions are favourable. If adolescents must earn money this enables them to do so while receiving training. If a community finds it cannot afford to supply the expensive equipment and accommodation for a day vocational school, it can under a part-time plan utilize the machinery, etc., of the local industries. Economy in teaching staff is also affected as groups of pupils go to school only on alternate weeks, days, or months. This scheme has the additional value of giving the boys their practical training under real production conditions. It offers a happy combination of school and industrial influence, at a minimum expense.

Part-time schools for vocational education are so highly thought of in the United States that all federal grants for industrial education may be spent in promoting them and 20 per cent of such grants must be used in this way if spent at all.

(d) Evening Schools

The board approves of the organization of evening schools under the Vocational Act. These are classes to give opportunity for self improvement to workers *during their leisure hours*. Usually they deal with the technical aspects of the day work of the student, though this need not always be the case.

If even a fair proportion of our people could be induced to devote a part of their leisure to constructive purposeful study, the standard of efficiency would soon be advanced and the plane of citizenship raised. The evening school is the most economical, efficient, and adaptable instrument of vocational education yet devised. It possesses undreamed possibilities and applications. It may be organized in any place where a group of 10 workers with a common interest can be found—provided a teacher is available. In these days of shorter hours of work and keener competition, it is bound to have a big development.

Already many centres outside New Brunswick have established evening high schools. Within the past few months the unions of Boston have established a labour union college on the evening school basis. This will enable the members to procure training of university grade during leisure hours, and finally procure a degree in arts or science.

The Vocational Board believes an evening school should be established in every community in New Brunswick.

(e) Itinerant Schools

Some phases of vocational education require so much equipment and technical knowledge in their presentation as to place them beyond the reach of small communities through any of the above instrumentalities. To meet this difficulty the board favours the organization of itinerant schools which will carry the equipment and technical knowledge from place to place, giving short intensive courses in each locality desiring the same. A beginning will be made this year by organizing such a school for motor mechanics.

The itinerant school is being used extensively in Ontario and the western states.

(f) A Correspondence School

As soon as possible it is the intention of the Vocational Board to make technical training available through correspondence courses. This is to give opportunity to those throughout the province who may be isolated or who cannot procure locally the kind of help they require. This service is particularly needed in small communities where special technical training may be required by too few people to warrant the establishment of a local class. Courses will be outlined that such help may be given by correspondence directly from the Vocational Department. Nova Scotia has been carrying on such a service for years. During 1919 the International Correspondence School alone sold more than 1,000 courses in New Brunswick at an aggregate price of about \$100,000.

Something for every Community

By means of the above six kinds of schools the Vocational Board has outlined the beginning of a programme to make practical instruction of less than college grade, available to all the people of the province who need it. Any community in which a need can be shown to exist may adopt one or all of these forms of training.

This is but a beginning however, and as experience and changing conditions point the way, other methods of organizing for the dissemination of secondary grade vocational education will doubtless be adopted.

VOCATIONAL TEACHERS ARE NEEDED

The greatest single difficulty in the successful establishment of vocational education in New Brunswick, is to procure competent teachers. Without a supply of these real progress is impossible. They will have to be selected from the present teaching profession, and from the ranks of workers and given special courses of training. This will require time and money. It will retard progress for a few years; but as the vocational schools begin to function the problem of securing teachers will be less difficult.

As a beginning in teacher training, the board decided to pay the tuition and travelling expenses of a limited number of qualified persons who wished to attend standard institutions abroad to get the necessary preparation. Already seven teachers have availed themselves of this offer.

The summer school is an excellent means of enabling teachers to secure special training during their vacations, and good results can be secured by continuing the courses over a period of years. The Vocational Board decided to use it and to begin in 1919 with the subject of home economics.

A course was accordingly held in Fredericton during the month of July and was attended by forty teachers. It was a great success, for which Miss Mallory and Miss Flewwelling deserve the credit. They were ably assisted in its teaching and management by two experts from the States. Both elementary and advanced work was given. About 80 per cent of those attending are now teaching elementary phases, and thus laying the foundation for real vocational work later.

A committee, of which Dr. Bridges of the normal school is chairman, is now working out a permanent policy for training vocational teachers. It is hoped that the recommendations of this committee will go into operation at the beginning of the next school year.

PROGRESS IN VOCATIONAL TRAINING DURING FIRST YEAR

Although the Vocational Department has been in operation for only one term, a great deal of interest has been evidenced in the movement throughout the province. Ten communities have formally undertaken to provide a vocational education service in one or more of the forms outlined above, and 1,776 students have applied for instruction. In the aggregate about \$23,000 have been voted by these localities to be spent by their Vocational Committees during the year. Over seventy teachers have been employed. Information at hand justifies the belief that many additional communities will take up the work at the next school year.

Day and evening classes are running in Woodstock. The other places are organizing evening schools only for the present. This is a very satisfactory showing.

Following is a list of Vocational Committees already appointed: Carleton county, Fredericton, St. John, Chatham, Newcastle, McAdam, Edmundston, Milltown, Bathurst, Loggieville.

PROGRESS IN DAY VOCATIONAL SCHOOLS

Woodstock leads the Province

Woodstock and Carleton county have united to establish the first day vocational school in the province. It opened on November 1, 1919. In addition St. John will be running short day courses for adults during the second term of the present year. Full time day vocational classes are being planned by the St. John committee for next year, and a special vocational building is contemplated.

In Edmundston, Milltown and other places new high school buildings are being built, and these will include vocational departments. The outlook therefore is for steady progress in this connection though it will doubtless be slow.

The Carleton County Vocational School

This school was built with funds left for the purpose by the late L. P. Fisher. It is maintained jointly by the province, the Carleton County Council and the town of Woodstock. The organization now includes (a) pre-vocational classes; (b) day vocational classes in commercial work and home-making; (c) part time class in agriculture, and (d) evening classes in home-making, commercial and mechanical work. The total enrolment is 236 in the day departments and 45 in evening classes.

The director of the school is Mr. R. W. Maxwell. Associated with him is a staff of two men and three women, making a total of six teachers. The budget for the school will be over \$9,000 for the year.

The agricultural department is particularly significant. In it are eighteen young men representing practically every parish of the county. They are enrolled on a part time basis, and will spend six months of the year in school and six months on their father's farm. During the latter period they will carry on practical agricultural

projects on a commercial basis under the supervision of their teacher. While in school their work will include carpentry, blacksmithing, cement work, motor machines, farm book-keeping, and public speaking.

The formal opening of the Carleton County Vocational School took place on January 20, 1920.

A County Vocational School for each Municipality

The Woodstock school is a good type. Its central features are agriculture and home-making on a broad and modern basis. Similar institutions have been developed in Alberta, Wisconsin and Massachusetts. It is to be hoped that other New Brunswick municipalities will follow the example of Carleton county, and it is the intention of the vocational board to take the matter up with all the county councils as soon as possible.

PROGRESS IN THE ESTABLISHMENT OF EVENING SCHOOLS

It is the organization of evening classes that the greatest progress has been made during the term covered by this report. In the places where work is actually under way 1,540 students have applied for instruction. These include persons from 16 to 60 years of age, and are representatives of practically every element of our population. Over 60 teachers have been engaged. Courses have been established in the following 26 subjects:—

Commercial arithmetic,	Preparatory subjects,
Book-keeping,	Lumber survey,
Electric wiring,	Mechanical drawing,
Electrical theory,	Machine design,
Motor mechanics,	Architectural drawing,
Dressmaking,	Sheet metal pattern drafting,
Cooking,	Sign painting,
Home nursing,	Estimating for builders,
Millinery,	Applied mathematics,
Elementary sewing,	Machine drawing,
Stenography,	Showcard writing,
Typewriting,	Business English,
Power machine operating,	Industrial chemistry.

Evening schools are economical and efficient. They are held at a time when both the school buildings and the learners would otherwise be idle. They supply knowledge to adults that can be used at once, and prepare the way for a thorough vocational programme for adolescents.

The indications are that they will soon become general throughout the province. For typical evening school programmes see Appendix B.

Tables and Financial Statements

As no official returns have yet been made to the Vocational Board, it is impossible to include tables and financial statements. These will appear in succeeding reports.

In this connection it is fitting to state that more complete data as to school attendance should appear in the educational reports of the province, and graded and ungraded schools should be reported upon separately if we are to clearly understand the size of our educational problem.

The Vocational Education Movement

This movement signifies a great social change. Vocational education is not new, it is only being reorganized. Formerly boys were apprenticed and received it under private auspices by the pick-up method. It then included only mechanical skill. Now

it is being organized on a school basis at public expense and includes technical and citizenship subjects.

This change is significant. It means that all are now to have some form of secondary training provided by the State. Those wishing a classical training no longer have a monopoly in this field.

THE THREE OUTSTANDING PROBLEMS TO BE SOLVED IN THE DEVELOPMENT OF VOCATIONAL EDUCATION

1. Teachers

The urgent need for qualified teachers has already been referred to. We simply must have these in order to make progress. Some system of subsidizing them while taking the training, as is done in Ontario and Alberta, will doubtless have to be resorted to.

2. Buildings and Equipment Must be Supplied

Equipment Used in Soldiers' Civil Re-establishment

The New Brunswick Act gives no Government aid towards buildings and equipment. Unless these are supplied, however, real progress is impossible. If left to be provided wholly by local funds advancement will be slow.

Practically all the provinces are giving aid to the extent of one-half of the cost of equipment at least. Ontario gives the localities 50 per cent on both buildings and equipment. In Nova Scotia the Government buys all equipment. Most of the Acts in the States provide aid in this connection.

With Dominion funds at our disposal the board is of the opinion that New Brunswick should encourage the extension of vocational education by granting aid to the localities on these capital expenditures.

3. Compulsory Attendance

The growth of vocational education has everywhere been closely followed by the extension of compulsory attendance legislation. As the various countries and states have broadened and enriched school opportunities for adolescents, so as to meet the needs of all, the tendency is to require boys and girls to take advantage of these opportunities.

Recommendations

The Vocational Board recommends the following in order to hasten the organization of schools in New Brunswick:—

1. That authority be given to reimburse localities for outlay on capital account for vocational education. Twenty-five per cent of the Dominion grant may be used for this purpose. It is felt the province should at least make possible the expenditure of this amount.

2. That steps be taken with a view to making the vocational education equipment soon to be disposed of by the Soldiers' Civil Re-establishment Department of Canada available for educational purposes on favourable terms.

3. That increased aid be given on the salaries of vocational teachers out of Dominion grants available.

PROVINCE OF NOVA SCOTIA

SUMMARY REPORT OF DEPARTMENT OF TECHNICAL EDUCATION FOR YEAR ENDING
MARCH 31, 1920

Under the Department of Education, the province of Nova Scotia offers technical education in the form of university courses leading to a degree in civil, mechanical, mining, and electrical engineering in a central institution, and also secondary technical training in diversified forms spread all over the province. For the purposes of this report only the efforts respecting secondary training will be considered. These may be divided into the following branches: (1) College Short Courses, (2) Correspondence Courses, (3) Industrial Continuation Schools.

1. COLLEGE SHORT COURSES

These courses are held in the months of January, February, and March at the central institution at Halifax, the Nova Scotia Technical College. Following the example of the agricultural colleges which extend the facilities of their organization by offering short courses of one or two weeks at a time when the activity on the farms is at a minimum in the winter months, the Technical College prepared a series of short courses extending over a period of two months. These were given during January and February, when industrial operations in the province are not so brisk in most branches as during the rest of the year. Building construction is practically at a standstill, the coal mines usually produce a diminished output and are banking a lot of coal, metal mining slackens up to a considerable extent, and many other lines of activity are lessened by the conditions of winter. As an experiment, a course in surveying, designed especially to fit certificated land surveyors, was first attempted, and this was so successful for this purpose that a number of other courses was offered in January, 1915. These courses were as follows: Architectural drafting, land surveying, structural steel drafting, steam engineering, machine design, electrical machinery, coal mining, metallurgy of iron and steel, technical chemical analysis, assaying.

The short courses seem to fill a definite educational need in the province and promise to be an important part of the work of the technical college. There are only a favoured few of those pupils in the public schools who have the opportunity of securing a full high school course and a four-years' training in a college to prepare them for professional life. Home circumstances in some cases force the boy into industry when he is 14 or 15 years old and has completed only the sixth, seventh or eighth grade. In many other instances the careless boy has found the school irksome and uninteresting and, not understanding fully the future value of education, elects to go to work. No doubt many of these youths have quite as much mental aptitude for college training as the ones who are fortunate enough to get it. We may believe that a great deal of talent which could be developed for the good of the community is submerged in menial tasks and never brought out by education. Many young men come to their senses after they have been working for a few years and regret that they left school so quickly after they had reached the age limit of compulsory attendance. If they are ambitious to train themselves for more responsible positions they turn naturally to the evening technical classes and secure what knowledge they can from this source. For some of the more ambitious who wish to go further than the evening courses can take them, there are no local facilities for training because these men do not offer themselves in large enough groups simultaneously to make it worth while to form advanced classes for them, and usually the necessary apparatus is not available.

There are no fixed educational standards of admission to the short courses. The student entering upon the work must prove that he has had enough practical work along his special line and that he possesses the proper mental calibre and desire for improvement to benefit by the instruction offered. A short course consists of lectures,

recitation, and problem work in the morning and field, drafting room, or laboratory work in the afternoon. A period of two months may seem a short time to secure a thorough grasp of one technical subject, but the number of hours included in one of these courses is usually in excess of that spent on the same subject in a four-years' course in an engineering college.

2. CORRESPONDENCE COURSES

These courses in home study were started in the summer of 1916. A small number of branches of training were first provided in a tentative way to try out the ground and to serve as a basis for future expansion.

A very good start was made during the year 1917, but economics forced on the department by the long-continued war caused a temporary abandonment of this promising branch of work. The subsidies of the Dominion Government to promote technical education will make it possible to renew efforts in this direction and to expand the work.

3. INDUSTRIAL CONTINUATION SCHOOLS

These schools are held in various local centres throughout the province and the classes offered are held for the most part in the evening. For the purposes of administration the schools are classified under two heads, viz.: (A) Coal Mining and Engineering Schools, and (B) Evening Technical Schools.

The first class of school ministers to those in coal mining communities who desire to prepare themselves for Government certificates of competency necessary in order to hold responsible positions in collieries as officials or stationary engineers. The second class offers advantages in technical instruction to those in industrial communities who wish to increase their knowledge and efficiency in business, industry, or in the home.

The schools usually open during the first two weeks in October and close about the middle of April. Each class meets for two or three evenings a week for a two-hour session each night. For backward pupils or for men who did not have an adequate opportunity to secure an adequate common school training in their youth, it is necessary to hold preparatory classes in English and arithmetic in each local centre. This preliminary education must be carried out in order that the pupils may properly take advantage of regular technical or commercial instruction in other classes.

(A) COAL MINING AND ENGINEERING SCHOOLS

A great deal of the industrial life of Nova Scotia results from the exploitation of the widespread seams of coal with which she has been endowed. It is necessary for every colliery official, overman, underground manager, or manager, to hold a Government certificate of competency secured by strict and thorough examination. It is also necessary for stationary engineers operating the colliery hoisting engines to be certificated. In order to provide the educational opportunities for ambitious coal miners and mechanics whereby they can pass the examinations, an evening school is maintained in practically every coal mining town in the province. These schools have been in operation for about thirty years, with the result that practically all the officials in the collieries of Nova Scotia have been trained in these classes.

The instruction for miners covers such subjects as Mines Regulation Act, methods of work, mine ventilation, mine surveying, geology, electricity applied to mining, first aid to the injured, mechanics, etc. It usually takes three or four winter sessions for a man to get enough training to pass the highest examination for mine manager. For stationary engineers, the ground covered includes steam boilers, steam engines, pumps, air compressors, steam power plant operation, mechanical drawing, electricity, etc. In this branch also a student follows the courses for three or four winters before he is able to pass the examinations for a first-class certificate. Coal mining classes are demanded for every colliery community, but the engineering classes are usually held only in the larger centres.

A summary report of the enrolment in the schools for the session ending in April, 1919, follows:—
ENROLMENT FOR SCHOOL YEAR 1918-19

Locality	No. of Classes	Total Enrolment	Enrolment of Classes					
			Preparatory	Engineering	Practical Mathematics	Drawing	Electricity	Mining
Cape Breton County South	Glace Bay.....	3	47	22		5		20
	Dominion.....	1	1	8				8
	Birch Grove.....	1	16	16				
	Reserve Mines.....	1	2					2
Cape Breton County North	New Waterford.....	3	33	11	17			5
	Florence.....	3	21	9	9			3
	Sydney Mines.....	5	39	10		6	7	9
Inverness Co., Inverness.....		3	21	11		5		5
Pictou County.....	Stellarton.....	3	42	28	7			7
	Westville.....	3	22			6		16
Cumberland County	Thorburn.....	1	8		8			
	Springhill.....	1	9	9				
	Joggins Mines.....	1	21	21				
Total.....	29	289	137	41	6	23	7	75

Total Classes.....	1918	1919	Decrease
	41	29	12
Total Enrolment.....	453	289	164

A summary of the enrolment for the schools as they opened in October, 1919, is appended.

ENROLMENT FOR SCHOOL YEAR 1919-20

Locality	No. of Classes	Total Enrolment	Enrolment by Subjects					
			Preparatory	Engineering	Mine Mathematics	Drawing	Electricity	Coal Mining
Cape Breton North	Sydney Mines.....	5	82	29	26	9	5	13
	Florence.....	3	26	9		10		7
Cape Breton South	Glace Bay.....	4	46	17	8			13
	Dominion.....	2	34	18		8		16
	Dominion No. 6.....	2	33	14	19			
	Port Caledonia.....	1	7	7				
	New Waterford.....	3	69	32	25			12
Inverness.....		3	23	7	10			6
Port Hood.....		1	4					4
Pictou County	Westville.....	4	32	6	6	5		15
	Stellarton.....	3	46	31	5			10
	Thorburn.....	3	30	7	17			6
Cumberland County	Springhill.....	3	33	19		9		5
	Joggins Mines.....	2	28	23				5
Total.....	39	493	219	90	26	41	5	112

(B) EVENING TECHNICAL SCHOOLS

Evening classes are maintained in the leading urban communities in order to offer opportunities for self-improvement of adults engaged in trades, commerce and home-making occupations. The schools open during the first two weeks in October

and are continued until about the middle of April. Each class meets two or three evenings per week for two hours each night. A large variety of subjects is offered, the special courses being given to suit the dominant industries in each locality.

During the year that has just closed the following classes were conducted:—

Practical arithmetic	Art craft metal work
Business English	Direct current machinery
Practical algebra and geometry	Alternating current machinery
Book-keeping	Gasolene engines
Stenography	Automobile running and repairing
Typewriting	Elements of chemistry
Mechanical drawing	Technical chemical analysis
Machine drawing	Metallurgical chemistry
Machine design	Dressmaking
Architectural drawing	Skirtmaking
Building construction drawing	Garmentmaking
Architectural design	Millinery
Building construction estimating	Cooking
Car building design	Home economy
Structural steel drafting	French conversation
Elements of electricity	French composition

For administration purposes the evening school in each locality is an entity. The affairs of each school are controlled by an advisory committee consisting of members of the school board together with leading representatives of manufacturing and labour interests, acting in conjunction with the Department of Technical Education.

The instructors are all part-time teachers and are selected on the basis of their trade proficiency and teaching power. Not many of them have had pedagogical training, but after one or two winter sessions under guidance and instruction from the inspector they have given very satisfactory results.

The enrolment in the various classes for the year 1919-20 is as follows:—

ENROLMENT FOR SCHOOL YEAR 1919-20

Locality	Number of Classes	Total Enrolment	Enrolment by Subjects																
			English and Arithmetic	Prac. Mathematics	Book-keeping	Stenography and Typewriting	Dressmaking	Millinery	Domestic Science	Mech. Drawing	Structural Steel Drafting	Ship Drafting	Arch. Drawing	Steam Engines	Electricity	Surveying	Chemistry	Auto Mechanics	Machine tool Operation
Halifax.....	44	1119	230	33	166	....	139	46	7	51	....	....	69	27	91	11	16	202	31
Sydney.....	15	336	93	15	24	41	76	....	12	30	....	....	....	....	15	....	12	18	....
Sydney Mines.....	5	107	....	....	....	40	67	....	....	....	....	....	....	....	....	....	....	....	....
Amherst.....	12	198	20	....	21	31	43	....	....	19	....	....	....	....	17	....	....	47	....
Truro.....	2	32	....	....	....	16	16	....	....	....	....	....	....	....	....	....	....	....	....
Westville.....	2	32	....	....	....	....	22	....	10	....	....	....	....	....	....	....	....	....	....
Stellarton.....	1	16	....	....	....	....	16	....	....	....	....	....	....	....	....	....	....	....	....
New Glasgow.....	14	251	30	12	13	34	57	....	36	28	7	27	....	....	....	....	....	....	....
Yarmouth.....	6	123	30	....	20	28	25	....	....	10	....	....	....	....	10	....	....	....	....
Glace Bay.....	6	127	....	....	18	31	46	....	....	....	....	....	....	....	....	....	....	32	....
Totals.....	107	2341	403	60	262	221	507	46	65	138	7	27	69	27	140	11	28	299	31

Throughout the whole province there is now distinct awakening of all the people in respect to education and praiseworthy desire to largely supplement the opportunities for vocational training. The subsidies granted from the Federal Treasury should prove a great boon in providing adequate facilities for our people to make themselves proficient for their varied occupations.

F. H. SEXTON,
Director Technical Education.

APPENDIX I

MEMORANDUM OF AGREEMENT made the day of A. D.

BETWEEN

The Honourable GIDEON D. ROBERTSON, Minister of Labour of Canada, hereinafter called "the minister," of *the First Part*,

AND

, hereinafter called "the province,"
of *the Second Part*.

Whereas by the Technical Education Act (chapter 73, Statutes of Canada, 1919) the minister is authorized, subject to the approval of the Governor General in Council, to enter into this agreement;

And Whereas by an order of the Lieutenant-Governor in Council the province has signified its desire to take advantage of the said Act;

Now Therefore the parties hereto mutually agree each with the other as follows:—

1. For the purpose of the said Act and of this agreement, "technical education" means and includes vocational education or instruction which is supplementary to and distinct from the general educational system of the province, and the controlling purpose of which is to fit young persons for useful employment or to improve the efficiency of those already employed, subject, however, to the following limitations:—

- (a) No person under fourteen years of age shall be admitted to vocational day classes.
- (b) No person under fifteen years of age shall be admitted to vocational evening classes.
- (c) Courses of instruction of college grade are not included.

2. Subject to the modifications made herein all the provisions and conditions set out in the said Act are deemed to be incorporated in this agreement and to be binding upon the parties hereto.

3. In addition to the stipulations contained in the said Act, it is agreed that in determining the amount spent by the province on vocational education no account shall be taken of:—

- (a) Any payment or support given to any religious or privately owned school or institution.
- (b) Any expenditures which have been made in respect of any educational work for which a grant is paid to the province by the Minister of Agriculture of Canada.

4. The following expenditures and no others shall be deemed to be properly made on vocational education:—

- (a) Purchase or rental of land, buildings, furnishings and equipment to be used for vocational education.
- (b) Remuneration and travelling expenses of persons employed for the purposes of administration of vocational education and all expenses incidental to such administration.

- (c) Remuneration of teachers employed to conduct vocational education classes.
- (d) Training of teachers specifically for vocational educational work.

5. (1) The province shall furnish the minister with the following:—

- (a) A monthly statement of the work done during each month on a form to be prescribed by the minister.
- (b) At the end of each half of the calendar year a detailed financial statement showing the amount expended by the province under this agreement.
- (c) Such evidence as the minister may require to show that the amounts paid to the province hereunder are expended in accordance with the terms of this agreement.

(2) The province shall not be entitled to claim any part of the moneys available hereunder for the purchase or erection of buildings or extensions and equipment unless the plans and specifications of such have been approved by the minister.

6. The minister or any one authorized by him shall at all times have the right to inspect any work on technical education existing or being carried on under the terms of this agreement, and if the accommodation, equipment, text-books, courses of study, discipline or qualifications of teachers are in his opinion not adequate or satisfactory or if such work is not being carried on to his satisfaction, he may withhold payment of any moneys remaining unpaid under the terms of this agreement. Persons appointed by the minister under this section to inspect shall not have any directive control over any part of the educational organization of the province but shall have opportunity to witness any part of the work, as normally conducted from time to time.

7. The province shall, as soon as possible after the execution of this agreement, take necessary steps to provide for the adequate training of a sufficient number of teachers and to furnish such other officers as may be necessary to carry out the provisions of this agreement.

8. Subject to the conditions of the Act and to such modifications as may be mutually agreed upon by the parties, this agreement shall be renewed on or about the first day of April each year until the 31st March, 1929.

9. This agreement shall not be valid until the same is approved by the Governor in Council.

In Witness Whereof the minister has hereunto set his hand and the seal of the Department of Labour, and _____ has hereunto set his hand and the seal of the said province the day and year first above written.

APPENDIX II

BILL

No. 99 of 1919-20

An Act respecting Vocational Education

[Assented to February 4, 1920.]

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of Saskatchewan, enacts as follows:—

1. This Act may be cited as "*The Vocational Education Act, 1920.*" Short title
2. In this Act, unless the context otherwise requires, the expression:— Interpretations"
 1. "Board" means any board of trustees of schools established under the provisions of *The School Act* or of *The Secondary Education Act*; "Board"
 2. "Council" means the council of the city or town in which the school is established; "Council"
 3. "Department" means the department of education; "Department"
 4. "Minister" means the minister of education; "Minister"
 5. "Regulations" mean regulations made under the provisions of this Act. "Regulation"
3. With the approval of the minister the board of trustees of a town district or of a high school district may provide for the instruction of pupils in the following classes of schools:—
 - (a) day schools, which shall have an independent organization or be constituted as a department of an existing educational institution, the purpose of such schools or departments being to train adolescents for greater efficiency in industrial pursuits and for the duties of citizenship;
 - (b) evening schools, in which adolescents and adults may receive theoretical and practical instruction in such occupations as they may be engaged in during the day.

CONDITIONS OF ADMISSION

4. For admission to a day school applicants shall hold Grade VI or Day schools equivalent standing, or be at least fourteen years of age.

VOCATIONAL EDUCATION

5. For admission to an evening school applicants shall be at least fifteen years of age and shall satisfy the principal that their general education is such that they will benefit by the instruction for which application is made. Evening Schools

VOCATIONAL EDUCATION COMMITTEE

6. (1) To assist in the establishment and management of any school or department organized under this Act there shall be appointed annually

a vocational education committee with the powers hereinafter specified. This committee shall be composed of ten members, four of whom shall be nominated by the board, three being members thereof; of the remaining members three shall be employers of labour and shall be nominated by the council; the remaining three shall be employees and shall be nominated by such local organizations as the board may determine.

(2) The members of the committee shall be British subjects and shall be resident ratepayers of the district.

7. Subject to the approval of the board the vocational education committee shall have authority:— Powers of committee

- (a) to provide suitable accommodation and equipment;
- (b) to arrange for conducting the school or any class thereof in any school or other suitable building in the district;
- (c) to employ and dismiss teachers and fix their salaries;
- (d) to visit and report to the board on the schools under its charge; and
- (e) generally to do all other things necessary for carrying out the true object and intent of this Act with respect to any school or class which may be established thereunder.

8. Each vocational education committee shall submit annually to the board for approval an estimate of the amount of money required for the next academic year and the board shall meet all expenditures made in carrying out the work which has been approved. Estimates of expenditures

9. Subject to such regulations as may be approved by the Lieutenant-Governor in Council, the minister shall apportion any moneys available for the support of vocational and technical education and for the establishment and maintenance of schools authorized by this Act. Apportionments of moneys

VOCATIONAL EDUCATION

10. For the proper administration of this Act the minister shall make Regulations governing:— Regulations

- (a) the character of the accommodation and equipment;
- (b) the qualifications of teachers or instructors;
- (c) the course of study;
- (d) the fees that may be charged to pupils; and
- (e) any other matters relating to vocational education not herein provided for.

11. This Act shall come into force upon such date as may be fixed by proclamation of the Lieutenant-Governor in Council. Coming into force

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Canada. Technical Education, Director of
Annual report.
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